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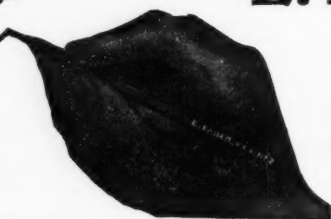
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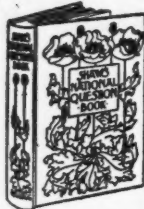
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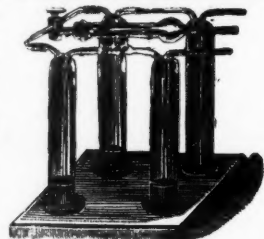
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The N. E. A. Convention at Boston.

By Jane A. Stewart.

The National Educational Association has just concluded its forty-second annual gathering which convened at Boston on Monday, July 6, and continued thruout the week. The event was, in most respects, all that had been anticipated for it in the minds and purpose of its chief promoters and directors, and of its host of participants. In breadth and variety of program, it has been the equal of any of its notable predecessors. In brilliancy of social features and in extent of hospitality it far transcended any previous gathering, and in point of numbers, Boston has given to educational mass-meeting annals a record-breaking example.

The "Boston Committee" headed by President Eliot, of Harvard university, has set the pace for all future conventions and it will go down into history as the pre-eminent prototype for all future groups of local purveyors for educational annals.

From the beginning to the end of the great meeting, success has marked every provision, and scarcely a flaw or break has marred the perfection of the plans. Credit for this feat is entirely due to the committee, who have labored indefatigably, and have planned wisely and broadly for the entertainment and comfort of their guests. At its close they enjoy the reward of work well done. And as President Eliot intimated in his address before the kindergarten section, on joy in labor, "There are no better satisfied men in Boston to-day than the local executive committee who worked in the hope and expectation of the happiness that comes thru achievement."

When the announcement was made that the National Educational Association could meet in Boston and, for the first time in many years, visit the attractive scenes of the earlier traditions associated with the settlement of the country and the beginnings of popular education, it was known that there would be an immense magnet for drawing a vast throng. Four years ago at Los Angeles, an enrollment of 13,656 touched the high water mark of attendance. Boston in 1903 has raised the record to 35,200. Of this number New York, the largest constituency outside of New England, is credited with over 3,000.

Not only the Eastern states have been represented, but teachers went in large groups from the California coast, from Arizona, Texas, and from the great Middle West. The red badge of Illinois has been side by side with the yellow emblem of Louisiana and the dark blue of Connecticut. And one of the prettiest of the many badges was that of New York state with its white ground and attractive symbolic devices. The relative proportion of women and men at the great meeting has not changed from former years, the ratio being at least 10 to 1. There was a marked preponderance of the younger element.

The committee, with true Yankee foresight and skill, made its provision for entertainment on the vast scale which the later demands have warranted. It chose the airiest, most central, and charming locations in the city as the center of the convention's operations. Copley square has been for a week the great centrifugal center of the tide of humanity. The elegant hotels which the Back Bay affords, were preempted for states' headquarters. The parlors of the Westminster, the Brunswick,

the Vendome, the Victoria, the Nottingham, Oxford, Copley Square, and many other handsome hotels of Boston's exclusive district were teeming daily with animated groups.

New York state and city occupied pleasant, cool parlors in the Brunswick, which were the resort of many visitors during the very hot days of the convention. A dozen churches, all the adjacent halls and auditoriums, and nearby school buildings were thrown open for the purposes of the meeting. Every public building of any prominence on the Back Bay, including the famous Boston library, Trinity church, the new Old South church, the great Mechanics Exposition hall, the Girls' Latin school, the commodious buildings of the Massachusetts Institute of Technology, and all the large churches, was placarded with a big white sign bearing the cabalistic initials, "N. E. A." and announcement of the functions going on within. Perhaps in no single instance was the thoughtfulness of the committee more in evidence than in this extensive and minute placarding of the places of resort.

The busiest of all the horde of busy hives during the convention was the Walker building of the Massachusetts Institute of Technology, where for a week a continuing great stream of "new arrivals" lined up the sidewalk, often extending clear round the block, and waiting, patiently for hours to reach the registration bureau whose large force was kept busy with the stupendous work of entering names. One of the most appreciated provisions was the large cool white tent upon the grass between the headquarters and the Rogers' building, for the reception and information of the visitors, from which squads of new arrivals were hourly conveyed to their lodging places.

Bright boy guides, volunteers from Boston schools, in white duck trousers and dark blue military coats and caps were everywhere, ready to escort the puzzled visitors or to set them in the right direction. Attentive and cordial women and men with red "headquarters" and "Boston" badges were greatly in evidence, anticipating every need and offering information. "Hospitality" was the legend in white on the clubwomen's blue badges, and the word in its fullest meaning indicated the chief characteristic of the host of hosts and hostesses. Probably no convention anywhere ever had a more delightful rest resort than that prepared by the clubwomen of Boston, who had transformed the Girls' Latin school on Boylston street into a place of real delight. One room was like a Japanese tea-garden with bamboo furnishings, couches, screens, palms, and Japanese lanterns pendent from the ceiling. A corps of nurses were in attendance in an improvised hospital. Every facility and convenience that a tired convention-goer could need was provided.

This spirit of hospitality extended everywhere from the state and civil authorities, who gave a luncheon to the leading educators, to the clubs, and private citizens who vied with each other in planning for the pleasure of their highly regarded visitors. Owners of beautiful country estates opened their doors to large groups of several hundred each, and entertainment was provided on a most lavish scale. Artists, authors, and leading publicists held receptions, and the prominent educators

were guests of honor of the various clubs and societies who opened their doors to the N. E. A. A great chorus and symphony orchestra gave repeated concerts in Symphony hall.

Highly, however, as the bewildering maze of social pleasure and entertainment was valued, nothing could have been more appreciated than the unusual opportunities afforded to the teachers for visiting the famous shrines of American history and of great American literary and historic figures. It was beautiful to see the joy and delight of the well-mannered throngs of shirt-waisted, guide-booked teachers at the places hallowed by the country's best tradition with which Boston is enriched.

"Shall we ever forget this?" was the frequent remark in tones full of awe, happiness, and deep pleasure. It was suggestive, perhaps, of the "trills" to which Samantha naively confesses. But in the main, it was the expression of the deep feeling of every one in the long lines who was admitted on the convention afternoons to the inner recesses of the quaint old homes of Longfellow and Lowell in Cambridge, and to the Wayside Inn of Hawthorne, and the Emerson homestead at Concord; to the shrines at Plymouth and Lexington, and the many other places famous in our literature and history.

In the multiplicity of attractions and places of interest, there was naturally an embarrassment of riches. The varied outings have ranged from the "Seeing Boston," the trolley trips, and coaching parties to excursions down Boston harbor, and canoeing on the Charles. The sightseeing has included the varied indoor and outdoor objects of art for which Boston is famous; the exhibits of schools; the historic places and monuments, from the new Hooker statue to the graveyard on Copp's Hill. None of the historic sites and sights were omitted as outlined graphically by THE SCHOOL JOURNAL's description, and it would be difficult to determine which were the most popular.

The teachers have stood on Plymouth Rock; they have seen the rooms in which Longfellow and Lowell penned their inspirations; they have shaken hands with the daughters of Longfellow and Emerson; they have drunk tea in the classic precincts of Harvard college and of Copley hall; they have viewed the rich art treasures of Boston; they have visited the homes of Emerson and Hawthorne; they have seen the venerable Edward Everett Hale and Mary Livermore; they have visited the haunts of the great and good and have received imperishable mental images and new ideas for future development in the pursuit of their vocation.

The hospitality shown to them personally has been the outward evidence of the hospitality to the ideas and ideals they represent in promoting that which is rightly regarded as "a stronger safeguard of American liberty than a standing army." From the moment when they pinned on the dainty gold N. E. A. button badge with its embossed image of the Boston state house and its little pendant of white ribbon, they have been made to understand that they possessed the magic open sesame to the most cordial consideration and hospitable attention. Did they appreciate what they have received? The most critical and skeptical student and observer of the convention body could but affirm that they did.

The character of the convention as a whole was that of the individual teacher, decorous, attentive, serious, cheerful, and high-minded. The tireless pertinacity, the patience and persistence of the teacher was shown in the faithful attendance on the sessions for which abundant opportunity was provided. The wholesome natural capacity for enjoyment was evident; and equally so was the eager desire "to study, to know, and to admire forever the works of thought that have been the entertainment of the human spirit in all ages."

For the first time in its history, the N. E. A. held morning and evening sessions only. On the kindergarten principle of playtime and purposeful amusement, the afternoons were happily devoted to recreation and

pleasure. The effect of this was to shorten section meetings and to condense the program. The churches and halls, even on the hottest of the hot days by which the convention was marked, were filled with overflowing audiences as a rule.

The Educational Program.

All the departments were in full swing during the week, with many of the old familiar faces on platform and at the fore. The convention was not only a colossal mass of educators representing nearly one-tenth of the teaching force of the United States, but it was marked by the presence of an unusual number of the men and women preëminent as leaders and exponents of educational thought and progress. There were noted college presidents, including President Eliot; Nicholas Murray Butler, of Columbia; G. Stanley Hall, of Clark university; Henry S. Pritchett, of the Massachusetts Institute of Technology; William De Witt Hyde, of Bowdoin college; E. A. Alderman, of Tulane university; Michael Anagnos, of the Perkins Institute for the Blind, at Boston; George Harris, of Amherst college; Miss Sarah Arnold, dean of Simmons college; William J. Tucker, of Dartmouth; W. F. Slocum, of Colorado college; William R. Harper, of Chicago university; Joseph Swain, of Swarthmore college; Ira Remsen, of Johns Hopkins; Dr. H. B. Frissell, of Hampton institute; Benjamin Ide Wheeler, of the University of California. Among the state and city school superintendents were Charles R. Skinner, New York state; Dr. N. C. Schaeffer, Pennsylvania; Thomas M. Balliet, Springfield, Mass.; J. H. Van Sickle, Baltimore, Md.; Dr. Edward Brooks, of Philadelphia, the oldest living member of the N. E. A.; Richard G. Boone, of Cincinnati; William J. Shearer, Elizabeth, N. J.; C. W. Carroll, Rochester, N. Y.; F. Louis Soldan, St. Louis, Mo.; J. K. Stableton, Bloomington, Ill.; W. K. Fowler, of Nebraska; Alfred Bayliss, of Illinois, and L. D. Bonebrake, of Ohio. There were school principals of all grades; members of boards of education, state and local; college professors; art and music teachers; leaders in special education, and teachers of all grades from kindergarten to university upon the program. In addition, experts in educational thought, including Hamlin Garland, the author; Richard Watson Gilder, editor *Century Magazine*; Mrs. Ella Flagg Young, University of Chicago; Earl Barnes, lecturer, Philadelphia; William T. Harris, U. S. commissioner of education; Gov. Chas. B. Aycock, North Carolina; Miss Elizabeth Harrison, author and kindergarten, Chicago; Dr. Leslie W. Miller, Industrial Art school, Philadelphia; Miss Estelle Reel, U. S. general superintendent of Indian schools; Maud O. Carpenter, journalist and author; Dr. Ida C. Bender, Buffalo; James H. Canfield, librarian Teachers college; Dr. Sheldon Jackson, Alaska. Dr. Merrill E. Gates, of the board of Indian commissioners, Washington, contributed to the current of educational ideas as voiced in the great mass meetings.

Among the best attended sessions was that of higher education, held in the beautiful Central Congregational church, every seat being taken and the aisles filled with people standing to hear the wise words of Presidents Eliot, Butler, Tucker, and other prominent educators of national repute. Another very popular department was that of child study, every seat being occupied in the commodious First Baptist church, corner of Commonwealth avenue and Clarendon street. The kindergarten opening session at Dr. Hale's church had to remove to the Mechanics hall, the attendance reaching nearly 2,000. Business education, manual training, normal schools, elementary and secondary education, physical training and science instruction, the library department, and the department of special education all had large and appreciative audiences.

The National Council, during its five sessions in the Second church, attracted interested listeners to a number which tested the capacity of the church.

The great auditorium of Mechanics' hall, Huntington avenue, was the scene of the general evening sessions.

It was beautifully decorated with cool green and white bunting and large palms, and the letters N. E. A. in gold lit up the background. The best attended of the general sessions was that of the opening night, when the governor of Massachusetts, in a gem of a speech, the mayor of the city with unaffected cordiality, and President Pritchett, of the Massachusetts Institute of Technology, gave welcomes with the genuine ring to them, the replies being given by Superintendent Lane, of Chicago, and Commissioner Harris, of Washington. Everybody listened eagerly to President Eliot's scholarly and broad "new" definition of the cultivated man, which was followed by an able address by Dean Andrew F. West, of Princeton, on "The Present Peril of Liberal Education," which he reviewed under the heads of commercialism, illiteracy, confusion, and love of ease. The vast audience on opening night filled every part of the great Mechanics hall, many standing. It was the largest gathering assembled during the week.

Manual Training, School Gardens, City School Yards, the Teaching of Good Citizenship, Parks and Public Education, the Nature Study Movement, and Education in the Southern States, were the varied themes of the other four evening sessions. The addresses touched on current phases of the topics presented.

Professor Woodward, of Washington university, St. Louis, contended that the curriculum of the secondary school must be broadened in order to meet the increasing demand for courses of study that touch modern life, modern conditions, modern activities, modern responsibilities. President Pritchett affirmed that the philosophy of education has not changed in 2,000 years; and that modern education recognizes the same dual function of the schools that Aristotle suggested—training for effective work in some station in life, and training for the best life in that station. The manual training high school as it exists to-day makes its contribution to the second rather than to the first function. The successful teaching of trades as a feature of the public school system in Springfield was described by Superintendent Balliet, who said that the policy of the school is primarily to improve the skill and efficiency of men already engaged at their trade and only secondarily to teach trades to young boys.

President Eliot pointed out that establishing gratuitous trade schools supported by public taxes is only following at a lower grade the well established precedent of many American universities of the West in providing free instruction for many professions.

In a valuable address on the "Teaching of Civics," Mr. R. W. G. Welling, of New York city, a politician and philanthropist, declared that the machinery of government must be taught by some form of applied civics, as aptly illustrated in Mr. McAndrew's school in New York city; that at the same time some knowledge must be imparted of the country's history and the great principle of democracy, and that in addition there must be some infusion of the idealism which comes from the study of the lives of great men and the reading of great books, and of the spirit that marked the Hebrews, the Greeks, and the Romans to whom patriotism was religion. Hon. Nathan Matthews, Jr., of Boston, declared that his city's chief justification for its expenditure in the past twenty years of forty million dollars for parks and \$500,000 annually for their maintenance was found in the great deficiencies of urban life which parks supply to city-born children in the opportunity to become familiar thru personal experience and contact with the beautiful objects of nature, and to acquire that love of nature which is an essential part of education.

Professor Bailey, in a scholarly address, defined nature study as not a method or any set of subjects; but "an attitude and a point of view." He declared the movement to be vital and fundamental in its natural methods of teaching the child to observe, to infer, and to inquire; and that it will add new value and significance to all the

accustomed work of the schools, being not revolutionary but evolutionary.

The Kindergarten.

No department of the National Educational Association, it is safe to say, has held more interesting and instructive sessions than that of the kindergarten. The speakers chosen mostly represented notable thinkers and workers outside of active kindergarten effort. No address given before the section was more highly applauded than that of Miss Sarah L. Arnold, dean of Simmons college, who spoke "not as a specialist or enthusiast, but as an observer." She illuminated her interesting remarks by pertinent instances of kindergarten life. She told of teachers who had forgotten or neglected the principle of growth thru well-directed self-activity. One of these had given a class an example in arithmetic. One boy raised his hand and said: "I got the same answer but I did it a different way." "Erase your work, and do it this way," was the hasty command. Another teacher queried a pupil who was sitting in quiet meditation: "What are you doing?" "Just thinking," was the answer. "Well, stop your thinking and go to studying," was the teacher's response. Miss Arnold urged that institutional spirit should not take the place of the mother spirit. The kindergarten, she said, is placing before the community civic interest and mother interest.

Mr. Richard Watson Gilder in an entertaining paper delineated the uplifting influence of the kindergarten in the home and in the district, especially as he had learned about its workings in New York. "The kindergarten charm," he said, "infects the whole family," and he gave among many apropos instances—that of the mother who confessed, "I used to hit my Josie something awful, but now I don't," and of another who said that she had only lived since she had known the mothers' club and learned how to deal with her children.

A delightful address was that of Miss Elizabeth Harrison, of Chicago, who delineated some of the abstract and concrete results from her personal experiences of mothers' classes, citing one mother who had taken up a carpet, cleaned the floor, and given her restless flock the starch box to make drawings, because she had learned in kindergarten that it is better to keep the children employed than to suppress them. The mothers' classes, she said, must be based on the great truth that each child is the effort of the divine mind to express itself in concrete form. Great as the father's opportunity in training children, it is not one-tenth that of the mother.

The department of Indian education, as usual, presented an array of fine speakers and a most interesting program. The question of educating the red man was discussed by leading and experienced Indian teachers from South Dakota, Montana, Carlisle, Indian Territory, and Oklahoma. Men of broad philanthropy, among whom were Hamlin Garland, James Canfield, G. Stanley Hall, and others, gave of their study and thought on the subject. Dr. Edward Everett Hale, who voiced the invocation on opening night, came before the Indian session with a characteristic greeting, saying: "I came to learn," words which might well be termed the keynote of the whole convention. The excellence of the capacity of Indian schools, 28,024 in 1902, was pointed out by Mr. H. B. Peairs, of Haskell institute, Lawrence, Kan. President Frissell, of Hampton institute, commended the Indian day schools because of the instruction which they give to parents as well as to children in civilized ways. Cultivating the work spirit among Indians as a means to active citizenship was the subject discussed in all its phases, both practical and philosophical.

The pros and cons of the extension of the high school course and the proper length of the baccalaureate course was a question which aroused keen interest in the department of higher education and of secondary education because of the eminence of the men who participated in the discussion, and the variance in their views. Presi-

dent Eliot summed up the situation in his remarks on the various plans proposed, declaring that the forward movement in education proceeds, as does that in politics, by a succession of compromises. And, after years of successive experiments, he affirmed, the result would be obtained by compromise. He thought that the consensus of opinion pointed to the hard and fast four-year course as a thing of the past.

That public school athletics must begin with the child was an idea emphasized at the Physical Training meetings, which were many and varied. An entire afternoon's entertainment was afforded in Mechanics' Hall under the auspices of the department, an exceptionally fine demonstration being that of two classes of boys and girls from the Lincoln school, of Brookline, Mass., under the direction of Mr. Hartvig Nissen, director.

In a notable paper before the child study department Mr. Sanford Bell, professor of pedagogy at Mt. Holyoke, argued in favor of men teachers for adolescents. He conceded that for pupils up to the age of nine women seem to be the better teachers, and for children between nine and thirteen, both seem to be equally good. But for the kind of influence needed by the adolescent, the vigor, courage, and independence of the male teacher were essential.

Co-education came in for its share of discussion, Dr. G. Stanley Hall and his supporters standing for the idea of separation, and others, including Mr. Frank S. Fosdick, principal of the Masten Park High school, Buffalo, declaring that co-education was axiomatic, and, if it had been in any sense subversive of the highest ideals, it would have long since been banished.

Discussing the percentage of boys who leave the high school, and the reasons therefor, Prof. A. Caswell Ellis, of the University of Texas, called attention to the well-known fact that only two per cent. of the original enrollment of schools left the high school as graduates. The attendance can be increased in various ways, he thought. The addition of manual and practical courses has increased the attendance in Kansas City high schools 64 per cent. In Galesburg, Ill., making high school courses elective and treating pupils sympathetically as individuals, raised the numbers enrolled 400 per cent. in seven years.

The proceedings of the convention were not marked by any especially novel contribution to educational thought and progress. It represented rather a review of what has been done, an exploitation of certain well defined methods, and an agitation for certain progressive ideals already well demonstrated. There was no new enunciation and no distinctly noteworthy point of advance marked in the lines of educational practice and purpose. The convention as a whole, however, because of its volume and environments, has been a notable event in educational history.

The trend of the advance to be made in the future is manifest to the most impartial onlooker at this gathering. The omission of the soprano in the great chorus of the convention is a lack which can surely no longer be overlooked. There was too much bass. The women speakers who were heard justify this augury. The great audiences were crowded with women, practical, experienced educators, original in methods and full of ideas. Many of these had voices as clear, sweet, and ringing, a gift of expression as admirable, and qualities of heart and mind as engaging as Miss Sarah Arnold, Miss Elizabeth Harrison, Mrs. Ella Flagg Young, Dr. Ida Bender, and the few others who were heard with exquisite pleasure and profit, and convictions as strong and courage as good as Miss Margaret Haley, of the National Teachers' Federation, whose emphatic objection prevented the entire elimination of the voting power from the active membership body by the rejection of President Butler's proposition that the president appoint the nominating committee.

The newly elected board of directors, it is pleasant to note, includes several women, among them Miss Catharine Goggin, Illinois; Estelle Reel, Wyoming; Lucy Rob-

inson, West Virginia, and May Scott, Idaho. The new president, John Williston Cook, of Illinois, is a native of New York state. He was born in Oneida county in 1844. Graduating from Illinois State university he has received the degrees of A.M. and of LL.D. from Knox college and from Blackburn university. He has taught for thirty-seven years in the Northern Illinois State Normal school and became principal of the school in 1890.

The notable educators who have passed away during the year were remembered in the annual memorial session of the National Council, over which W. H. Bartholomew, vice-president of the council, presided. Dr. J. L. M. Curry, the Southern educator, President W. M. Beardshear, of Ames, Ia., and Dr. E. E. White, of Ohio, formerly president of the National Educational Association, were fittingly memorialized.

The New York delegation urged upon the council a national canvass of the condition of teachers throughout the United States as to salaries, and to publish the results. The memorial was signed by Dr. Charles R. Skinner, W. B. Gunnison, William McAndrew, Harry Towle, Katharine Blake, and Honor Quinn.

In addition to the regular program there were many interesting sidelights of instruction and information. Many attended the morning lectures at the Boston public library, given by Miss Lilian Whiting, who described "Literary Boston;" J. Randolph Coolidge, who spoke on "The Decoration of School-Rooms;" C. Howard Walker, "Artistic Boston;" Edwin Bacon on "Old Boston," and S. S. Curry on "The Voice in Teaching."

That the visit of the great body of educators had its introactive influence on the city and people which so lavishly and hospitably entertained it is not to be doubted. The event possibly may not rank with the historic events of the city's early days, but it is a fact not to be gainsaid that there have been few occasions in the records of the New England metropolis equal in impact to the recent pedagogic occupation of Boston.

The graduating class of Harvard university for 1903 numbered 613. A recent number of the *Harvard Crimson* contained the names of the members of the senior class, with the occupation each expects to enter upon. The list follows:

| | | | | | | | | | |
|----------------|---|---|---|-----|-------------|---|---|---|-----|
| Business | - | - | - | 137 | Journalism | - | - | - | 8 |
| Law | - | - | - | 112 | Ministry | - | - | - | 6 |
| Teaching | - | - | - | 77 | Art | - | - | - | 6 |
| Undecided | - | - | - | 67 | Insurance | - | - | - | 5 |
| Medicine | - | - | - | 46 | Diplomacy | - | - | - | 3 |
| Engineering | - | - | - | 44 | Railroading | - | - | - | 2 |
| Graduate study | - | - | - | 27 | Travel | - | - | - | 1 |
| Banking | - | - | - | 16 | West Point | - | - | - | 1 |
| Architecture | - | - | - | 15 | Literature | - | - | - | 1 |
| Science | - | - | - | 16 | Philosophy | - | - | - | 1 |
| Brokerage | - | - | - | 12 | | | | | |
| Chemistry | - | - | - | 10 | Total | | | | 613 |

It is surprising how many of the students intend to study law, and how small a proportion expect to make teaching their life work. Only one man in eight will enter the latter profession.

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The Cultivated Man.

President's address, by CHARLES W. ELIOT, Harvard University.

[General Sessions.]

The ideal of general cultivation has been one of the standards in education. It is the object of this paper to show that the idea of cultivation in the highly trained human being has undergone substantial changes during the nineteenth century.

I propose to use the term cultivated man in only its good sense—in Emerson's sense. In this paper he is not to be a weak, critical, fastidious creature, vain of a little exclusive information or of an uncommon knack in Latin verse or mathematical logic; he is to be a man of quick perceptions, broad sympathies and wide affinities, responsive but independent, self-reliant but deferential, loving truth and candor, but also moderation and proportion, courageous but gentle, not finished but perfecting.

There are two principal differences between the present ideal and that which prevailed at the beginning of the nineteenth century. The horizon of the human intellect has widened wonderfully during the past 100 years, and the scientific method of inquiry has been the means of that widening. The most convinced exponents and advocates of humanism now recognize that science is the "paramount force of the modern as distinguished from the antique and the medieval spirit" (John Addington Symonds—Culture), and that "an interpretation of humanism with science and of science with humanism is the condition of the highest culture."

Emerson taught that the acquisition of some form of manual skill and the practice of some form of manual labor were essential elements of culture, and this idea has more and more become accepted in the systematic education of youth.

The idea of some sort of bodily excellence was, to be sure, not absent in the old conception of the cultivated man. The gentleman could ride well, dance gracefully, and fence with skill, but the modern conception of bodily skill as an element in cultivation is more comprehensive, and includes that habitual contact with the external world which Emerson deemed essential to real culture.

We have become convinced that some intimate, sympathetic acquaintance with the natural objects of the earth and sky adds greatly to the happiness of life, and that this acquaintance should be begun in childhood and be developed all thru adolescence and maturity. A brook, a hedgerow, or a garden is an inexhaustible teacher of wonder, reverence, and love.

The scientists insist to-day on nature study for children, but we teachers ought long ago to have learnt from the poets the value of this element in education. The idea of culture has always included a quick and wide sympathy with men; it should hereafter include sympathy with nature, and particularly with its living forms, a sympathy based on some accurate observation of nature.

We proceed to examine four elements of culture:—

Character. The moral sense of the modern world makes character a more important element than it used to be in the ideal of a cultivated man. Now, character is formed, as Goethe said, in the "stream of the world" not in stillness, or isolation, but in the quick moving tides of the busy world, the world of nature and the world of mankind. To the old idea of culture some knowledge of history was indispensable.

Now, history is a representation of the stream of the world, or of some little portion of that stream, 100, 500, 2,000 years ago. Acquaintance with some part of the present stream ought to be more formative of character and more instructive as regards external nature and the nature of man, than any partial survey of the stream that was flowing centuries ago.

The rising generation should think hard, and feel

keenly, just where the men and women who constitute the actual human world are thinking and feeling most to-day. The panorama of to-day's events is an invaluable and a new means of developing good judgment, good feeling, and the passion for social service, or, in other words, of securing cultivation.

But some one will say the stream of the world is foul. True in part. The stream is what it has been, a mixture of foulness and purity, of meanness and majesty; but it has nourished individual virtue and race civilization. Literature and history are a similar mixture, and yet are the traditional means of culture. Are not the Greek tragedies means of culture? Yet they are full of incest, murder, and human sacrifices to lustful and revengeful gods.

Language. A cultivated man should express himself by tongue or pen with some accuracy and elegance; therefore linguistic training has had great importance in the idea of cultivation. The conditions of the educated world have, however, changed so profoundly since the revival of learning in Italy that our inherited ideas concerning training in language and literature have required large modifications.

In the year 1400 it might have been said with truth that there was but one language of the scholars, the Latin, and but two great literatures, the Hebrew and the Greek. Since that time, however, other great literatures have arisen, the Italian, Spanish, French, German, and above all, the English, which has become incomparably the most extensive and various and the noblest of literatures.

Under these circumstances it is impossible to maintain that a knowledge of any particular literature is indispensable to culture. When we ask ourselves why a knowledge of literature seems indispensable to the ordinary idea of cultivation, we find no answer except this—that in literature are portrayed all human passions, desires, and aspirations, and that acquaintance with these human feelings and with the means of portraying them seems to us essential to culture. The linguistic and literary element in cultivation therefore abides, but has become vastly broader than formerly, so broad, indeed, that selection among its various fields is forced upon every educated youth.

The store of knowledge. The next great element in cultivation to which I ask your attention is acquaintance with some parts of the store of knowledge which humanity in its progress from barbarism has acquired and laid up. This is the prodigious store of recorded, rationalized, and systematized discoveries, experiences and ideas—the store which we teachers try to pass on to the rising generation.

The capacity to assimilate this store and improve it in each successive generation is the distinction of the human race over other animals. It is too vast for any man to master, tho he had a hundred lives instead of one; and its growth in the nineteenth century was greater than in all the thirty preceding centuries put together. In the eighteenth century a diligent student with strong memory and quick powers of apprehension need not have despaired of mastering a large fraction of this store of knowledge. Long before the end of the nineteenth century such a task had become impossible.

Culture, therefore, can no longer imply a knowledge of everything—not even a little knowledge of everything. It must be content with general knowledge of some things and a real mastery of some small portion of the human store. Here is a profound modification of the idea of cultivation, which the nineteenth century has brought about. What portion or portions of the infinite human store are most proper to the cultivated man? The answer must be—those which enable him, with his individual personal qualities, to deal best and sympathize best with nature and with other human beings.

It is here that the passion for service must fuse with the passion for knowledge. We have learned from the nineteenth century experience that there is no field of

real knowledge which may not suddenly prove contributory in a high degree to human happiness and the progress of civilization, and therefore acceptable as a worthy element in the truest culture.

Imagination. The only other element in cultivation which time will permit me to treat is the training of the constructive imagination. The imagination is the greatest of human powers, no matter in what field it works—in art or literature, in mechanical invention, in science, government, commerce, or religion, and the training of the imagination is, therefore, by far the most important part of education.

I use the term constructive imagination, because that implies the creation or building of a new thing. The sculptor, for example, imagines or conceives the perfect form of a child ten years of age; he has never seen such a thing, for a child perfect in form is never produced; he has seen in different children the elements of perfection, here one and there another. In his imagination he combines these elements of the perfect form, which he has only seen separated, and from this picture in his mind he carves the stone, and in the execution invariably loses his ideal—that is, falls short of it or fails to express it.

Constructive imagination is the great power of the poet, as well as of the artist, and the nineteenth century has convinced us that it is also the great power of the man of science, the investigator and the natural philosopher. The educated world needs to recognize the new varieties of constructive imagination.

Zola, in "*La Bête Humaine*," contrives that ten persons, all connected with the railroad from Paris to Havre, shall be either murderers or murdered, or both, within eighteen months; and he adds two railroad slaughters criminally procured. The conditions of time and place are ingeniously imagined, and no detail is omitted which can heighten the effect of this homicidal fiction.

Contrast this kind of constructive imagination with the kind which conceived the great wells sunk in the solid rock below Niagara that contain the turbines that drive the dynamos, that generate the electric force that turns thousands of wheels, and lights thousands of lamps, over hundreds of square miles of adjoining territory; or with the kind which conceives the sending of human thoughts across 3,000 miles of stormy sea instantaneously on nothing more substantial than ethereal waves. There is going to be room in the hearts of twentieth century men for a high admiration of these kinds of imagination, as well as for that of the poet, artist, or dramatist.

It is one lesson of the nineteenth century, then, that in every field of human knowledge the constructive imagination finds play—in literature, in history, in theology, in anthropology, and in the whole field of physical and biological research.

That great century has taught us that, on the whole, the scientific imagination is quite as productive for human service as the literary or poetic imagination. The imagination of Darwin or Pasteur, for example, is as high and productive a form of imagination as that of Dante, of Goethe, or even Shakespeare, if we regard the human uses which result from the exercise of imaginative powers, and mean by human uses not meat and drink, clothes and shelter, but the satisfaction of mental and spiritual needs.

It results from this brief survey that the elements and means of cultivation are much more numerous than they used to be; so that it is not wise to say of any one acquisition or faculty—with its cultivation becomes possible, without it impossible.

The one acquisition may be immense, and yet cultivation may not have been attained. We have met artists who were rude and uncouth, yet possessed a high degree of technical skill and strong powers of imagination. We have seen philanthropists and statesmen whose minds have played on great causes and great affairs, and

yet who lacked an accurate use of their mother tongue, and had no historical perspective or background of historical knowledge. We must not expect systematic education to produce multitudes of highly cultivated and symmetrically developed persons; the multitudinous product will always be imperfect, just as there are no perfect trees, animals, flowers, or crystals.

Let us as teachers accept no single element or variety of culture as the one essential; let us remember that the best fruits of real culture are an open mind, broad sympathies and respect for all the diverse achievement of the human intellect at whatever stage of development they may be to-day—the stage a fresh discovery, or bold exploration, or complete conquest. The moral elements of the new education are so strong that the new forms of culture are likely to prove themselves quite as productive of morality, high-mindedness, and idealism as the old.

Religious and Secular Education Require Different Methods.

By DR. W. T. HARRIS, United States Commissioner
of Education.

[Abstract of paper before National Council.]

The principle of religious instruction is authority; that of secular instruction is demonstration and verification. It is obvious that these two principles should not be brought into the same school, but separated as widely as possible. Religious truth is revealed in allegoric and symbolic form and is to be apprehended not merely by the intellect, but by the imagination and the heart. The analytic understanding is necessarily hostile and skeptical in its attitude towards religious truth. The pupil is taught in mathematics to love demonstration and logical proof, and he is taught in history to verify the sources and to submit all tradition to probabilities of common experience. The facts of common experience dealing with the ordinary operations of causality are not sufficient to serve as symbols of what is spiritual. They are simple facts and do not serve for symbols—symbols are facts which serve as lenses with which to see divine things. On themes so elevated as religious faith deals with, the habit of thinking cultivated in secular instruction is out of place. Even the attitude of mind cultivated in secular instruction is unfitted for the approach to religious truth. Religious instruction should be surrounded with solemnity. It should be approached with ceremonial preparations so as to lift up the mind to the dignity of the lesson received. Christianity is indeed the religion of the revealed God; but there is no revelation possible to the mind immersed in trivialities and self-conceit. In religious lessons wherein the divine is taught as revealed to the human race, it is right that the raw, immature intellect of youth shall not be called upon to exercise a critical judgment, for at his best, he cannot grasp the rationality of the dogmas, which contain the deepest insights of the religious consciousness of the race.

The advocate of the parochial school often urges by way of rejoinder his view that the secular branches ought to be taught in the same manner as the catechism which teaches the dogmas of the church by authority, and it is a fact in parochial schools that the influence of the dogmatic tone sometimes creeps into the secular recitations, and too much authority in secular studies prevents the pupil from getting at the vital points. He cultivates memory at the expense of thought and insight, for the best teaching of the secular branches requires the utmost exercise of alertness and critical acuteness of the intellect. The spirit of authority loves dogmatic assertion and the memorizing of the exact words of the text-book. It represses the investigating spirit and stifles independent thinking. Arithmetic, algebra, and geometry cannot be learned by authority. It is, in fact, a nearer approach to the divine to have an insight into

the necessity of mathematical proof than it is to take the results of demonstration on authority.

In view of these differences between religious instruction and secular instruction, and in view of the contrast between the spirit of the school and the spirit of the church, it is clear that the school can not successfully undertake religious instruction; in fact, experience goes to show that the school fails to achieve success when entrusted with religious instruction, and it is certain that the church becomes less efficient when it abates in any way the impressiveness of its ceremonial in its art and music and in its use of the language of the Bible in its ritual.

President Hall's Views.

(Part of paper on "Education in the High School," read by Dr. G. Stanley Hall, before the Department of Secondary Education.)

Of course, co-education is here; it is widely approved by the people; it is cheap; it is expedient. These, and other facts, may be cited by its defenders. They are all old arguments, with which we, who impeach co-education, have long been familiar, but those of us who have studied the question have reached the conviction that there are new considerations which go to the very foundations of the question of the functions of the sexes, arguments which, I believe, from my study of this subject, cannot be arraigned. Many of them are so subtle that it is very difficult to state them particularly in a few minutes. One of these is that co-education during the middle teens tends to sexual precocity, and this is the worse because it is so subtle and insidious, and it is worse for boys than girls, because girls are more mature at this age than boys. It is a very grave danger to civilization.

This danger of sexual precocity tends in woman to over brain work, an exaggeration of the importance of the intellectual, a diminution of the importance of the natural and highest function of womanhood as it affects the content of heredity. This, it seems to me, is the cardinal question. Statistics show that marriage is undertaken later in life than formerly, and late marriage is one of the things which tend to the decay of civilization.

It is because I have given some study to this question that I have taken a new attitude with respect to the relation of the sexes. When the normal man reaches thirty and is not married I begin to think something is the matter with him. When he is thirty-five and is unmarried, I am almost convinced that something is the matter, and begin almost to think that it might be well to have a tax on bachelors. When he reaches forty and is still unmarried, I am convinced that something is wrong; that the man has neglected a duty and should be classed with those who will not fight for their country in time of war or who will not pay their taxes.

The school and all institutions should push sex distinction to its utmost. Make boys more manly and girls more womanly. Do not forget that motherhood is a very different thing from fatherhood.

One bad effect in girls is seen in all statistical studies, which show that their ideals are not found among noble women, but in men. About eighteen out of one hundred college girls even go so far as to state that they would rather be men than women, and more than one-half choose man ideals. This suggested to a recent writer that, unless there was a change, we would soon have a female sex without a female character.

A little bloom is rubbed off the ideal girl by a close and incessant contact. Each sex seems less ideal to the other when at close range and when in constant view. This disillusion weakens the motive of marriage, and one of the results of co-education is perhaps seen in a small and diminishing rate of marriage among college graduates of both sexes.

No issues of THE SCHOOL JOURNAL will be published during the weeks ending August 1 and 8.

The Teaching of Art.

By DR. DENMAN W. ROSS, of Harvard University.

[Abstract of address before Dept. of Art Education.]

Dr. Ross defined art as the expression of life: the arts as different modes of expression. We find two elements in every work of art: the motive of it and the performance of it. The motive of it may be good or bad; the performance, good or bad. We may have the fine performance of a bad motive, the bad performance of a good one. Is it useful, right, true? Those are questions of science or philosophy. Is it well done? That is the question of art. The wisdom of life lies in science or philosophy; the power of life lies in art. To give the wisdom of life without the power or the power without the wisdom is a mistake. It means, in one case, people who know what ought to be done (critics) who cannot do anything; in the other case, people who can do things, but know not what to do. The wisdom of life and the power of life must be given both together,—this in all cases of teaching.

Dr. Ross described his method of teaching the art of painting. He tries to give his pupils a knowledge of the best thought that has been put into painting that they may have fine impulses. At the same time, he gives them a great variety of technical exercises so that they may have the technical ability to follow their impulses. His object, he said, was twofold—to give his pupils the wisdom of life, which is science, and the power of life, which is art. Thucydides says of the Greeks (in the funeral oration of Pericles), that they had the singular power of thinking before acting, and of acting, too. That is what we want, as the outcome of our teaching, whether it be in the school, in the college, or in the university. We do not want an impotent idealism, but a potent one. We want all that idealism means—discrimination, right judgment, high standards, but, more than that, the ability, the power, to achieve our ideals technically. Then we may expect to realize them—when the philosopher goes to work and the working man becomes a philosopher.

Manual, Trade, and Technical Education.

By SUPT. THOMAS M. BALLIET, Springfield, Mass.

[Department of Manual Training.]

Civilization rests at the present time far more than at any previous period upon an economic basis. The life and progress of nations is dependent on industry and commerce, rather than as formerly on agriculture, and in the struggle for national supremacy these make for survival. There is a natural limit to the consumption of food products, but the demand for the products of manufacture, of industry, and of industrial art, which minister to our comfort, our pleasure, and our higher needs, is limited only by our means. With the rapid increase in wealth, the world's market for these products has in recent years become enormously enlarged; and the great nations of the earth are struggling in fierce, if bloodless, combat for the possession of it.

In this contest for industrial and commercial supremacy, next to natural resources, the chief determining factor is industrial and commercial efficiency. The conflicts between nations are no longer religious as they were in the seventeenth century, nor political as they were in the eighteenth, but they have become economic; and economic strength has shifted from agriculture to manufacture and commerce. Hence it comes to pass that the leading modern nations are rapidly becoming transformed from agricultural to manufacturing nations. This transformation in the case of England has been in progress for over a hundred years and is well nigh complete; and while in Russia it has but scarcely begun, in Germany, Japan, and the United States it has made immense progress within a generation.

This radical economic change has created a new environment to which nations and individuals must adjust themselves; and as the adjustment has not kept pace with the changes, we are confronted with the problem of how to further this adjustment so as to increase both national and individual efficiency.

It is the function of education to fit for life, to make the individual intellectually, socially, morally, and industrially efficient, to adjust him to his environment. A change so revolutionary as the one described demands, accordingly, a radical change in the organization of schools as well as in the curriculum and the methods of teaching. It demands that while the school must above all else aim to develop men and women, it must not stop with that; it must also train them to do with skill and effectiveness some form of work which has economic and commercial value in this complex environment, dominated by industry and commerce, in which they must live. The general development of mind and character, while it must always remain the chief aim of education, can no longer remain its sole aim; the schools must produce not merely a good man but a good man who is good for something—good for some specific thing. Economic efficiency as well as quality of mind and character must be made a test of education. This is a form of utilitarianism in education which is not only not antagonistic to the highest idealism, but which re-enforces idealism by giving it specific content and an ethical quality which connects it closely with life. The idealism which should dominate modern education is not an idealism which is based on the life of the past, but an idealism which idealizes the life of the present and emphasizes its moral problems and its duties. This was the idealism of the prophets and of Jesus himself; it is the only idealism which has ethical vitality.

What is Being Done.

The progressive nations of the world are rapidly readjusting their educational systems so as to meet the new demands of the age. The natural sciences, which have made the phenomenal development of modern industry possible, are emphasized as never before; and technical and commercial schools of all grades, as well as trade and industrial schools of every variety have sprung up. In this movement Germany, France, and even Austria have outstripped England and the United States.

On a visit to Europe a few years ago for the purpose of studying these schools, I found in Berlin alone twenty-eight industrial and trade schools attended by over 25,000 students. Almost every important trade was represented. Schools of the same kind are found in every city of the German empire, and the technical training which Germany gives to its industrial classes and skilled mechanics far transcends anything found in this country. The German army which this country will have to fear is not the army which carries guns but the army which carries tools. All over Europe the apprentice system still obtains to quite a large extent, and this makes it possible to have trade schools in which expensive shops are not necessary and in which academic and theoretical instruction is the important feature. This makes these schools comparatively inexpensive. Many small trades still survive in all European countries which have long since passed away here. Moreover, as is well known, many processes of manufacture are there still done by hand which in this country are performed by machines. These and other considerations make it inadvisable for us to copy their trade schools, altho we have many lessons to learn from them. On the other hand, their commercial schools and their technical schools are organized to meet conditions which are not radically different from our own and may safely serve as models to us.

There is no other country in the world that has accomplished as much in manual training as our own; there is no other country in which manual training has been made so extensively a feature of secondary education. The manual training high school is an American

institution and it contains possibilities which have not yet been realized.

The Work of the High Schools.

There should be a sharp line of distinction drawn in our thinking between manual training, whose aim is general education, and technical training in various industrial occupations and in trades. Manual training in some form should be an integral part of the course of study of all elementary and secondary schools, either as a required or as an optional study. There should be a workshop for this purpose connected with every high school.

Moreover, a broad course in manual training should precede instruction in specific trades and form the basis of such instruction.

The manual training high school, however, besides providing for a course in general manual training, ought to provide also courses in strictly technical lines of work whose aim should be to train foremen, superintendents, or in short that large group of skilled experts who come between the engineer and the mechanic and whose duty it is to superintend the work of the latter under the general direction of the former. In a word, our manual training high schools should be converted into technical schools of high school grade. We have enough engineering schools of college rank for our present industrial needs, but there is a very great demand for technical high schools in which thoro instruction may be given in English, in history, in the modern languages; and in mathematics, physics, and chemistry, especially in their applications to technical processes; together with courses in shop work, beginning with a general course in manual training and ending in specialized courses leading to specific lines of technical work. Such schools ought to have a three-fold function: First, to provide a general course in manual training for purely educational purposes; secondly, to serve as fitting schools for the higher technical schools; thirdly, to give technical instruction of high school grade for the purposes stated.

These should be the functions of the day high school. But these schools may serve another purpose by ministering to the needs of an entirely different class of students from those of the day school. Its expensive shop equipments may be used for the purpose of giving instruction in trades to men employed during the day either as apprentices or as journeymen. These equipments, which would otherwise lie idle after the session of the day school closes, make it possible to organize, at comparatively small expense, evening trade schools for the broadest training of men already at work at their trades.

An evening trade school of this kind has been conducted for the last four years at public expense in the city in which I reside, and I have been requested by the president of the association to give a brief account of it.

An Evening Trade School.

Previous to 1898 manual training was taught as an elective in our central high school. In September of that year a manual training high school was organized as a separate and independent school. In October, 1899, when the equipment of the shops had become measurably complete, an evening trade school was organized which has been continued every year since, from October to March. The school is in session six evenings a week from 7.15 to 10.15, each class meeting two or three times a week. The first year only three departments were organized: (1) mechanical drawing, (2) machine-shop practice and tool making, and (3) plumbing. During the past winter classes were conducted in the following subjects: (1) mechanical drawing, (2) machine-shop practice and tool making, (3) plumbing, (4) wood turning and pattern making, (5) mechanics and applied mathematics, (6) electricity (lectures and laboratory work).

Recognizing the fundamental character of mechanical drawing for all the mechanical trades, the students in all the other classes are encouraged, tho not required, to join some class in drawing. The course in mathematics

is arranged with reference to the special needs of mechanics, and includes such topics in arithmetic, algebra, geometry, and trigonometry as find a direct application in the mechanical trades. The course in electricity consists of a lecture course for persons who have only a scientific interest in the subject, and of a laboratory course whose aim is to offer practical instruction in electrical measurements and electrical construction, to persons who are employed wholly or in part in such work, or who desire to fit themselves for it.

The instruction in mechanical drawing is given by a man who has occupied important positions as draftsman in manufacturing establishments; the instructors in machine shop practice and tool making are men who have had wide experience as mechanics and as superintendents of shops. The teacher of pattern making had learned the trade as a young man and had practical experience in it for years. The teacher of plumbing is the plumbing inspector for the city and is recognized as an authority in his trade. The teachers of electricity, mechanics, and mathematics, are technically trained men. All of these teachers, except the teacher of plumbing and the assistant teacher in the machine shop, are employed in the day high school and are skilful teachers. The school is under the supervision of the principal of the day high school.

I need not add that only technically trained teachers are available in a trade school; and I believe we shall demand such teachers in the future also for the shop work in our manual training high schools; this will remove a chief objection that is urged against the use of the equipments of these schools by evening trade schools, inasmuch as the same teachers will be in charge of the shops and the laboratories both of the day and the evening schools.

The enrollment for the past winter was 311, and the per cent. of attendance was 86.8, ranging in the different classes from 81.5 in plumbing to 89.5 in pattern making. This will be recognized as a considerably higher per cent. of attendance than is found in other types of evening schools.

In enrolling students when all applicants properly qualified cannot be accommodated, preference is invariably given to men already engaged at their trade, either as apprentices or as journeymen, and such men constitute the large majority of students in the school. This policy recommends the school to manufacturers and other employers of skilled labor because it educates their men and trains them to do a higher quality of work; it recommends the school to the workingmen because it enables them to secure promotions and higher wages; and it wins for the school the good will of the labor unions because it does all this without appreciably increasing the labor market and becoming a means of depressing wages. I believe that such a policy is fundamental in the organization of all public trade schools in this country at the present time. Any other policy is likely to incur the opposition of the labor unions.

The men ranged in age from 15 to 54 and their average age was 23.7, 150 being below 21 and 161 above. Springfield has, besides a limited number of large manufacturing industries, including the shops of the United States armory, also a large variety of small industries requiring skilled labor. There were represented in the school fifty-eight different occupations, most of which could be roughly grouped under the following heads: Iron workers, wood workers, engineers and draftsmen, men employed in electrical work, apprentices, laborers, and clerks employed in connection with various trades.

The reasons which the men gave in their application blanks for entering the school vary but little. They either want to prepare themselves to do a higher grade of work in their own trade for the purpose of receiving a higher rating and increased wages, or they wish to change from the trade in which they are engaged to some other in which the remuneration is higher. Of the men enrolled in the machine shop, 69% gave the

former as the reason for joining, while only 9% gave the latter. On the other hand, of the men enrolled in the plumbing class only 43% had joined for the purpose of advancing in their trade, while 47% joined the class because they wished to change from their present trade to that of plumbing. A limited number entered the various classes for the sake of the indirect help which the instruction will give them in their trade. These are generally engaged in trades not taught in the school but closely allied to those which are taught. A certain number of men who have had opportunity to learn only a small part of their trade in the shops, on account of the minute specialization which modern production makes necessary, enter the school in order to broaden their training.

One of the men in the machine shop class said that he had been working at a drill for fourteen years and could not run any other machine; another had worked about the same number of years on a shaper, and a third had been drilling on the same part of rifles in the United States armory for eight years. These are but examples of many instances which might be cited where the broader training of the school supplements the narrow training of the shop. For such men the learning of a full trade is a liberal education.

This is a brief account of an experiment in teaching trades at public expense; it is a feature of our public school work which has provoked but little criticism and is rapidly growing in favor, and I believe it is destined to become a permanent part—and a very important part—of the school system of our city. Our experience has convinced me that there is no insuperable difficulty in the way of organizing an evening trade school in every well equipped manual training high school in the country, and I believe that this is the point from which instruction in trades at public expense can be most effectually developed with the least expenditure of money. Such evening trade schools can use not only the shop equipments of manual training high schools, but they can have the free use of their laboratories, of their drawing room with its equipment, and other facilities for academic instruction. No trade school, even for men who are mature and are already engaged at their trade, ought to confine its instruction to shopwork; it must not lose sight of the man in training the mechanic. Thorough courses in mechanical drawing, in mechanics, in applied physics and applied mathematics, and if possible in other academic studies, should be offered, and every student in the shopwork classes should be encouraged to take as many of these courses as his time and his strength will permit.

Education for the Trades.

By PRES. MILTON P. HIGGINS, of the Norton Emery Wheel Co., Worcester, Mass.

[Department of Manual Training.]

Among the difficulties of the manufacturer, not the least is the need of "effective skill" in his factory. It is now pretty generally agreed that we must look to the schools for our future skilled workmen. The apprenticeship system can never return, and if it could return in its best form, it would be entirely inadequate to meet our present demands. The modern intensified system of production is unfavorable to any system of training for the trades in our shops.

In recent years the requirements upon the workman have greatly advanced. The introduction of modern methods of manufacture, duplicate and interchangeable parts, automatic machinery, division of labor, piece work, etc., have not lowered the demand for the skill of the mechanic, but have raised it. Never before was the machinist called upon to make so many quick, accurate computations, to use such exact knowledge of the nature of materials, or to fit metal parts with such extreme exactness of form and size as now. He must

needs have superior training to enable him to *make* decisions quickly and accurately.

Perhaps the wonderful development of American industry, has been possible thru the peculiar natural dexterity of American skilled workmen; but it is estimated that already over fifty per cent. of all our skilled mechanics are born and trained in foreign countries, and this proportion will rapidly increase unless some means is adopted to educate American boys for the trades. While we do not object to this removal of our high grade mechanical work from the hands of American young men to foreign hands on account of any prejudice against the *foreigner*, yet a real objection is this: The requirements are so high and so exacting for skilled mechanics that nothing but the very best natural ability will meet the requirements. And it is quite possible to prove (even tho it may not be explained) that the American boy is by far superior in ability and fitness for mechanical employment. Another reason for getting mechanical industry and skill into the hands of American boys is the great value of so promising a field for our sons. Our young men are likely to overlook this grandest opportunity and turn their attention to a less promising calling.

The positive need of more and better skilled mechanics is felt by all manufacturers and there is a universal fear that things in this respect are rapidly growing worse and worse. The general need of the manufacturer for skilled workmen is so universally felt and acknowledged, that I do not deem it necessary to offer proofs to establish the fact that education for the trades is necessary.

Specific Requirements.

The specific needs (on our part), regarding the education and qualifications of workmen are as follows:—First, last, and always, we are looking for *effective, productive, profitable skill*. The manufacturer will employ the skilful man at good pay, even if he be untidy, coarse, ignorant, profane, and drunk on Sundays. I make this extreme statement to show, at the start, that any trade school system, any education for the trades, in order to meet the reasonable needs and demands of the manufacturer, must make skill the central part of the enterprise. The educational system must start from the shop, and all other elements of the school must radiate from the shop, because the power and success of the pupil's life depends upon his shop knowledge and dexterity. The engineering college, the university, and the technical school may, for obvious reasons, be a school with a shop attachment, but not so with the future trade school. That must be a shop with a school attachment. The system of education for the trades, to ever meet the needs of the manufacturer, must make skill first. With this order of things positively in mind, it becomes very easy to review all the American attempts to educate for the industries, and to determine just why and in what degree success or failure has resulted in various directions.

In order to understand our needs clearly, let us review briefly the various types of American schools and educational institutions, which to some extent have attempted to educate young men for mechanical industries.

First. The kindergarten and manual training in the public schools.

Second. The type of institutes of which Pratt, Drexel, and Armour are representatives.

Third. The practice departments in engineering colleges, universities, and technical schools, which, with their different methods, are represented by such schools as the Massachusetts Institute of Technology and the Worcester Polytechnic institute.

Fourth. Those schools that aim more directly at teaching trades,—making skill and dexterity the primal and central motive—such as the New York trade schools and the Williamson Free School of Mechanical Trades near Philadelphia. With these may also be classed the textile schools.

From each and all of these institutions the manufac-

turer hopes for aid with varying degrees of confidence.

Results from School Training.

Regarding manual training in the public schools, we find that we really never had any good grounds for our expectations; we find that all this outlay for shops and equipment is not intended to make workmen, or fit boys for the industries, or develop useful skill, but simply "to lay a broad foundation for a better manhood," and possibly to help the boy who has not succeeded in the regular school "to find himself." These schools make no pretensions at helping the boy to do something with himself after he has found himself (poor boy!), and furthermore, it is found that manual training in the public schools does not lead any greater number of boys to follow or seek a life of mechanical industry. We find, therefore, that the manual training shops are simply a substitute for school subjects which certain boys do not like. It takes the place of studies which have been used as a means of general culture and a broad mental discipline. Well! that is not just what the manufacturer is looking for, and suffering for. We have always been able to hire a sufficient number of "broad, cultured men"—graduated from college—good men, but good for nothing in our line, until they have been trained several years to do the things we must have done and for which we are willing to pay well.

We leave the manual training school entirely in your hands, Mr. Educator; make the most of it you can as a means of culture and mental discipline—we see nothing for us to hope for from that direction.

From the type of institutions represented so well by Pratt institute, Armour institute and many others, there are substantial grounds for the manufacturer's hope in this direction, and we are now able to fill, with the greatest satisfaction, many positions from the graduates of this type of school. Still for our greatest need, and for the place of our greatest anxiety, we look in vain for help in this direction. The best sort of skilled workmen are not likely to come from these institutions until the methods of teaching skill are made more effective by making the mechanical practice a larger proportion of the course—the course somewhat lengthened—and the shop practice more real and thoro.

Regarding the mechanical skill obtained at the engineering colleges, such as the Massachusetts Institute of Technology and the Worcester Polytechnic institute, there is a wide difference in the method and character of shop practice. But putting all the good of both and of all similar institutions together, and taking the average resultant, it is certain that the manufacturer, after he has filled with entire satisfaction all the important engineering positions in the factory, with efficient technical engineering graduates, still finds his unmet need for skilled workmen as great as ever, and he cannot expect any relief from the technical schools which confer engineering degrees. These schools are doing a higher work, but a work not one whit more important.

Trade and Textile Schools.

The schools represented by the New York trade school and the Williamson trade school are a forcible demonstration or indication of what is possible in education for the trades. At the New York trade school the aim is intensely directed toward the attainment of working skill in the shortest possible course, and there is no attempt made for general education outside of lectures and the directions pertaining to the work in hand, and to a statement of those special principles directly underlying the skill which is being taught. The Williamson Free School of Mechanical Trades is not open to this objection, for the time in a four years' course is generously divided (about half and half) between work and study.

From a manufacturer's point of view, the organization of this school is nearly ideal, with one exception, and the results are, indeed, all that could be expected. The exception is the unreal character of the shop work. A thoughtful person visiting this school is most forcibly

impressed with the enormous loss to the students and the financial loss to the institution when two hundred strong, energetic, interested young men are required to work metal and other good materials into excellent parts of useful machines simply as practice, and to see the results of their painstaking, skilful labor either put into glass show cases or thrown into the scrap heap. So long as the endowment meets the financial loss the school goes on, but cannot be enlarged by funds that might otherwise be utilized. The financial loss is not so serious as the loss to the student as compared with working upon real machinery and so getting the experience of four years, as well as better skill. This is a loss that is certainly very great and that I am confident can be remedied.

Probably there is no line of manufacturing where the trade school has been more thoroly organized for teaching the practical skill required than the textile schools, such as those at Philadelphia, and Lowell, Mass., and I think no attempt has yet been made where the results are more satisfactory to the manufacturer. This is largely because (owing to the nature of the industry) these schools have been conducted under conditions real and practically almost exactly the same as the pupils will meet upon leaving school. We can offer but one objection to the general plan adopted by the textile schools, and this is the same as applies to such schools as the New York trade school, inaugurated by Colonel Auchmuty, viz.: the education is extremely special and direct, consequently it must be narrow; and it is given to young men after they have received all the schooling they expect to receive. There will be great economy when the trade teaching can begin in a boy's life as early as the beginning of the high school. The class of boys who are to be mechanics cannot wait till the high school period is completed.

The Possibilities.

This brings us to the consideration of education that will, if possible, better meet the requirements of the manufacturer,—a system which shall retain the excellent features of the various schools referred to, and shall give an earnest boy, who has completed the grammar grades, a good, liberal education, and at the same time a thoro trade from which he can immediately upon graduation earn a good living at journeyman's pay, say \$2.00 per day.

I trust you will not at once conclude that this is impossible until I explain how it should be attempted, and until you have considered the grounds I have for so large a claim as this. The proposition is to take one hundred boys selected for their natural fitness to become skilled, educated mechanics. At the age at which they would enter the high school they are to begin to learn a trade. During the high school period of four years, they are working in a shop one-half of their time under the most favorable conditions; and they are spending the other half of their time in a department of the high school somewhat modified to meet their needs, and thus the boys will obtain an education which may be of more value in the life they are to follow than a regular high school course now gives. This, as I will explain, is the sort of education the skilled workman must have to meet the needs of the manufacturers.

The system for this training must consist of two parts. The first is the shop. It seems that the manufacturer has every reason to be satisfied with the work of the public schools so long as they adhere to teaching such science and such knowledge as is properly taught from books and otherwise in our school-rooms. We do not wish to duplicate this schooling at personal cost so long as we pay to support it at such great expense and with such excellent results, especially so long as our school boards and educators are willing to change, and in fact are constantly changing the courses to meet the needs of various classes of citizens.

We have good high school courses for those who fit for college, for those who wish a business training without much foreign language or literature, and we have

courses for pupils who must work during the day and are willing to study in the evening. There are many other attempts to meet the needs of the industrial portions of our communities. Is it asking too much, then, of the school board to make a half-time course where one-half of a class can be in the school-room one-half of the hours in a week, while the other half of the class is at work in a shop? If this is reasonable, it will be granted, and if it is granted, we have secured the book schooling and the science teaching without additional cost to any one, and with less cost for teachers and room, because a room will accommodate twice as many pupils coming one-half of the time as it can if they came the whole of the time.

Now, to provide for the shop instruction constituting the other half of this proposed half and half school. Since we give the highest credit to teachers and educators for the great work they accomplish in the high calling of teaching school and for giving mental training in all that pertains to the school-room, I assume that when an enterprise of a compound nature is to be undertaken jointly, consisting of one part book work and one part shop work, we do the school teacher no dishonor when we propose to delegate the different parts to specialists, i. e., the mechanic or manufacturer cannot assume to teach school while he may assume to be quite able to teach shop work and the highest skill of mechanical trades.

Herein lies the promise of sure success in education for the trades. It will come thru division of labor, followed by co-operation. Do not let us ask a school teacher to teach trades or a mechanic to teach school. If we do, both will continue to fail. Even if we could find a *combination-man* (a good mechanic and a good school teacher), even then he will fail because we cannot teach trades (such as the machinist trade) in a school-room, any more than we can grow ship timber in a flower pot or raise a cedar forest in a greenhouse.

In order to provide for successful shop instruction we must have a real shop. A real shop in the hands of shopmen—of manufacturers—is not difficult or impossible, but in the hands of teachers it is a burden and something to be feared. So it was when shops—within our memory—were introduced into technical schools, manual training high schools, and about every institution of learning in the land. It was not reasonable to suppose that schools or teachers could do much with real shops, or in fact do much at teaching trades; so all of them at once avowed that they were not teaching trades, but some of the underlying principles of the trades. The manufacturers all over the country were anxiously in hopes that some of these movements would produce some skilled and educated workmen, but still the universal word went forth: "We are not teaching trades, we are simply teaching boys so that you manufacturers can teach them trades." But this has never met our needs.

We want schools organized and conducted with a four-years' course that will give us thoroly skilled men, with minds somewhat trained and disciplined. We cannot teach trades in our factories, no matter how good material you may give us for apprentices. The shop part of the half and half school would make salable products with the aid of the students and with the sole purpose and aim of producing a class of mechanics of the highest skill pertaining to the mechanic arts.



The Canadian school boy and the children in the schools of Great Britain are taught to regard the wars with the United States in a spirit far more conducive to the cultivation of peace, pleasant relations, and good fellowship among the consanguine nations than that which is injected into history lessons of these particular episodes in our own schools. Honor is paid our heroes and credit given where credit is due. Judicially fair accounts are the rule and not the exception as unfortunately, we must admit, it is with us.

Conditions of Admission to Normal Schools.

By Supt. E. L. HENDRICKS, Delphi, Ind.

[Department of Normal Schools.]

In a consideration of the standard of admission to normal schools some things may be insisted upon with uniformity.

Good health and a sound body should be required. The dyspeptic and the deformed should not stand before the young.

Common sense and native ability should be prime requisites to admission. No amount of professional training can take their place. The teacher must be able to see the fitness of things.

If moral character building is the highest aim of education high types of manhood and womanhood should be demanded of those who engage in the finest of the fine arts.

Scholastic requirements for admission to normal schools may not be demanded with the same degree of uniformity. Conditions of admission should be determined by the needs of the educational field which supports the school.

Massachusetts requires graduates of first class high schools. Indiana would do as well, but at present it would be impossible for her to maintain that standard.

Less than twenty per cent. of Indiana's teachers at the present time have received any normal school training whatever. Nor is this dearth of trained teachers peculiar to Indiana. The report of the committee on normal schools informs us that seventy-five per cent. of the teachers in this country are without special training for their work. We must not increase this percentage of untrained teachers when we increase the standard of admission to our normal schools.

Should not the standard of admission vary with the character of work to be done? Students who will teach in the elementary schools might be received on a lower standard of scholarship than those who will teach in high schools. We admit that teachers in secondary schools should be college or university graduates with normal school training. Teachers in elementary schools should be high school graduates with normal school training. But the business world offers more lucrative employment for so great preparation.

We now have many teachers of mature years and successful experience but without academic scholarship. Our normal schools must continue, for the present, to provide for their training. The standard of admission should be high but never out of view of the common needs of the people.

The High School Phase of Physics Teaching.

Aims and Methods.

By GEORGE R. TWISS, Head of Dept. of Science in the Central High School, Cleveland, Ohio.

[Abstract.—Dept. of Science Instruction.]

John Tyndall insisted that physics should be used, not as a branch, but as a means of education. Instead of trying to teach physics we ought to try, thru the teaching of physics, to help in educating boys and girls into a broad and efficient manhood and womanhood.

The purposes of physics instruction are: (1) the development of power, ability to compare, to reason from known to unknown, to judge; (2) creation of an atmosphere favorable to general culture; (3) training in clearness and conciseness of expression; (4) instruction in practical knowledge; (5) inculcation of the love of truth for its own sake.

It is of the utmost importance that we should never lose sight of these five purposes—that we should weigh the factors of our teaching with reference to them and

adapt our methods and devices to their accomplishment.

Physics should be taught, not as a collection of miscellaneous facts, but as a body of organized truth, logically connected thruout.

Lectures, recitations, and laboratory work should be so connected that the student may progress, by a series of firm steps from familiar ground, to a new and a higher standpoint, from which he can get a wider view of the field and purpose himself for the next advance.

The best training is given and the greatest interest excited by guiding the pupils thru a series of mental operations similar to those by which great discoveries have advanced, i.e., observation of phenomena, formulation of a hypothesis to explain or generalize observed facts, deduction of particular facts that must follow as a consequence of the hypothesis, verification of the hypothesis by experimental tests of the consequences thus deduced. In these tests, effects other than those to be tested are excluded or corrected, for the student cannot go over the entire ground of the original discovery. It is the business of the teacher to eliminate all that is irrelevant or unprofitable for teaching purposes, so that the learner acquires, in a few lessons, the results obtained by years of investigation. When the student, thru this training, begins to feel that he is accumulating the mental power that can produce results thru the operation of these laws he will work and study without being driven. *The acquisition of conscious power is the strongest incentive to effort.*

The lecture indicates the logical connection of phenomena, laws, and theories. It may introduce or sum up the subject in part. It should adduce practical applications. Lecture experiments should be given only when necessary, and be clear and convincing. The lecture is the teachers' opportunity to inspire, to eliminate, and to present models in thought processes and modes of expression.

Recitation should be by topics, and each pupil should be subjected at the end of his recitation to a cross-examination which serves to clear up obscure points and fortify conclusions. If badly conducted it will obscure and discourage, but if successful, the student will critically examine the grounds for his opinions and will possess stronger confidence in the uniformity of natural laws and processes and in his ability to judge facts and draw conclusions. In effect it should be constructive, not destructive; positive, not negative. *The unity of the recitation plan should be preserved.*

Laboratory exercises should have the following characteristics: (1) They should compel close observation and discrimination, develop skill and self-reliance. (2) There must not be so many things to observe as to cause mental confusion. (3) Each should contain the basis for generalization or verify a principle previously deduced. (4) The reasoning must lead simply and directly to the conclusion. (5) The manipulations must not be too difficult. (6) Each must be susceptible of respectable accuracy and the results mainly such that their accuracy may be judged by comparing them with one another rather than with those given in books. (7) There must not be so many operations that they cannot be completed in the time allowed. (8) There should be a sufficient number, so that, when supplemented by the lecture demonstrations, the main outlines of the subject shall rest back upon experimental work or deductions therefrom.

The laboratory manual should give directions so clear and explicit that, if the student asks a question about manipulation, he can usually be sent back to them, thus giving the time and strength of the teacher for instruction in principles and thought processes.

The student's note-book should contain a complete record of the experiments, under the headings: Purpose, apparatus, operations, observations, and numerical data, sources of error, and lessons learned. The aim should be to make this record neat and systematic in form and also accurate, clear, concise, and simple in expression. It should be inspected often enough to secure reasonable compliance with these requirements.

A Practical Study of Drawing in Public Schools.

By BONNIE E. SNOW, Supervisor of Drawing,
Minneapolis.

[Department of Art Education.]

The study of art will come in time to be considered by all educators as a subject not less important than the study of literature. Theoretically it is now so considered by many, but no one has as yet possessed the courage or the ability to organize upon that basis a school supported by public funds. Friends of the new education are loud in proclaiming in assemblies like this, thru the educational press and upon the lecture platform, their belief in the prophesy that the school of the future will provide intellectual pursuits for half the time of the daily program, and industrial and artistic training for the other half; but these friends go back to their executive and official positions and do little toward bringing about a realization of their eloquently expressed hopes.

The influence of tradition is stronger within us than is faith in our own convictions, we are afraid. We know that the older conception of education made it the more valuable in proportion to its remoteness from ordinary life. Going to school and to college, in the past, has been an intellectual and a moral discipline. We are fond of saying, now, that the highest aim of man is to realize his faculties in acts, and we know that the education which enables him to do this is best. We know that the teaching of art in its true sense has a greater influence upon practical life than the teaching of mathematics, yet we lift no protesting voice when the program in the universal common school provides not only a daily recitation in number, but a daily study period as well. We see to it that she who is to teach reading knows how to read, and we would consider it the height of the ridiculous for one not versed in number to attempt to give instruction in that science, yet we are passive when confronted by the teacher who knows nothing of art, yet who would essay to initiate others into its mysteries.

The teacher of art sees, for instance, an elaborate and thoroly up-to-date system of geographies, profusely illustrated, carefully graded and furnished with addenda of maps, globes, sand tables and all the rest, cheerfully provided for all children in the graded schools. There is, too, a daily recitation and a daily study period for geography. Yet we believe that the study of art is not of less importance than a knowledge of the earth's surface. The school board who would fail to provide a system of readers, or a course in literature as it is now called, for children from the entering room thru all the grades to the high school would be called derelict or behind the times, but the teacher of art must content himself with such scrappy material as he can glean from libraries, museums, books, and magazines, and the wonderful wilderness of nature. Yet we of the faith believe that the study of art with all that it involves is equal in importance to the study of English.

The proper test for any subject permitted on the school program is its effect upon the child and his attitude toward it. In the light of our experience, handicapped as we have been by meager equipment, short periods of recitation time, and insufficient preparation on the part of the teacher, proof that drawing with its related art work has stood this test is overwhelming. But it will never be placed upon its proper footing until teachers of art demand and receive for their subject equal recognition with branches that are indicated in the epithet "the three R's." Such recognition will mean:

(1) As thorough preparation in drawing on the part of the grade teacher as is now required in English or mathematics.

(2) A complete equipment of art text-books, not books in which the drawings of children are to be placed, but books containing lessons to be learned, related reading matter, pictures beautiful in color and tone by the best

artists, and any other material helpful to the cause, which is now supplied, if at all, by the supervisor, at an undue expense of life, energy, and money.

(3) Much additional material in the way of portfolios of fine examples of work from the masters, past and present; from the world of architecture, sculpture, and craftsmanship, and from the best designers and illustrators of our day.

(4) A daily recitation period, varied in length to suit the age of the child, and in all grades where such time would be of advantage, a daily study period.

Is this asking too much? Not if we believe as we say we do that America is not only to be the leader in all departments of industrial life, but is also to be the scene of a great artistic movement, the outcome of a natural form of democratic life under modern conditions, and of a national appreciation of the value and beauty of esthetic ideals and artistic work.

The art teachers of this country are not as yet a very numerous body, but they cherish high ideals, and can wield a mighty influence for good in the direction of the educational work of to-day. In spite of unfavorable conditions surrounding the teaching of drawing and related subjects in most localities, I believe that art teachers have a sounder philosophical and psychological basis for their work than has yet come to any other class of workers in the educational field. If we might only realize a little more fully our ideals!

I do not forget in thus harping upon our deficiencies the good that has come into the education of the common people thru what may be called the art impulse. I know that school-rooms are to-day more beautiful; that the architecture of the school-house is improved; that we pay more attention to the beautifying of our school grounds; that school gardens of interesting plants and flora are becoming a necessity; that school books grow daily more attractive and inviting because of improved illustrations, binding, and text arrangements; that the whole world of beautiful nature has been opened up to the children very largely thru the influence of the art teacher and his paint box; that the whole movement for industrial education and manual training has been put upon a living basis because of its union with art principles; that millions of homes in our land have felt the uplifting influence of the love of all things beautiful developed in the children; and all this, I know, is directly traceable to the teaching of art, poor as it has been; in our public schools. It is because I believe so fully in the greatness of art that I plead for a fuller recognition of its power from those who have the shaping of courses of study and the apportionment of time in the arrangement of the daily program.

The art teacher of to-day has much to consider in laying out the work of eight different years to be carried on simultaneously in the different grades. He must bear in mind the needs and desires of the children; the limitations of the regular teacher, upon whom, in great measure, he must necessarily depend; the meager equipment as to materials he deems to be absolutely essential to successful work; the short and infrequent periods of recitations or class time; and the absence of any suitable text-book to be put in the hands of the children for definite study of principles. These conditions must be met and in a measure overcome before anything like successful results can be obtained. His course of study must be such as will command the interest and respect of the grade teacher. She must be willing, by study and practice, to overcome in some degree the deficiencies of her own education in this regard. She must feel that she is indeed the teacher of drawing, coming in direct touch with the children themselves. She must be led to value its influence upon the children and to depend upon it as an indispensable factor in their general development of mind and soul.

With the interest and co-operation of the grade teacher, the principal, and the superintendent, a more flexible program may be secured and perhaps a more

nearly just apportionment of time. School boards are becoming more generous in the provision of books, papers, pictures, and still-life material, and if the right system of text-books ever does come to light there is hope that purchasers will not be found wanting.

The Books Most Needed.

If my dreams could be realized in this respect I would make these art books the most beautiful school books that ever were published. They should be eight in number, one for each of the eight grades below the high school. The books should contain no blank pages for the children's drawings; these should be placed on separate sheets of paper of ideal quality and tint. The book for the little folks in the first year should be a combination picture book and primer. There would be in beautiful color the first presentation of the landscape,—blue sky, green field, the distant line of hazy foliage, the big tree or quiet pool in the foreground. The brief text accompanying the pictures should be of such simple nature and interesting style, that the "A 1st" child could read it as from a delightful story book. There would be illustrations in color and tone of flowers and fruits, birds and insects, toys and objects of childish interest, pictures of the human figure, in mass, in line, in color, expressing the games and occupations dear to the childish heart. There should be pictures of cats and dogs and rabbits and squirrels. There should be a few lessons in geometry—yes, even in the first grade, illustrating ideas of form, of shape, measures of distance, and names of certain conventions so cunningly related to fascinating exercise in modeling and making that the understanding of the term and the learning of the name become a natural and inevitable outcome of the lesson. I would begin—yes, in the first grade the first simple lessons in pure design, drawing upon my knowledge of the child mind and childish interest to help me in guiding his dawning sense of rhythm, balance, and harmony. In this first year book I would have bright colored illustrations of Indian pottery, rugs and blankets, and pictures of primitive looms. I would photograph processes of modeling, weaving, and making so that I might make vivid the imagination and bring to it a wealth of suggestion.

The text-books of the other grades should be modeled after a similar pattern. I would introduce by precept and illustration the more difficult and technical lessons as the years progressed. There should be an eight years course in the subjects so familiar to us all, in landscape, flowers and fruits, birds, animals and insects, the human figure still life and perspective, light and atmosphere, geometry and design, and construction. In this last, I should affiliate all my art principles as far as possible in the making of things, and in the study of things not possible to make in the school-room. Thruout my whole course there should be shown examples from the masters, both classic and modern, in connection with the various steps in the development of the subject.

Methods of Presentation.

Within the limits of a twenty-minute paper it is impossible to be more than general in suggestions bearing upon a topic so broad. In the past, we have been narrow in our methods of presenting art principles. We have been bound by the letter, and not sufficiently imbued with the spirit. We have felt that the teaching of representation, for instance, was a distinct division by itself, and that its principles had little to do with the principles of design. We could trace a relationship, it is true, between the study of objects and the study of perspective, and lately we have endeavored to dignify our objective work both from nature, life, and the world of manufacture, by uniting it with the consideration of what we have called composition. But it has remained for Dr. Ross and Mr. Dow to show us that the great mass of objective material which we have handled so confusedly and with so much awkwardness and misunderstanding is governed by very simple but very comprehensive laws, so that we have

come to see that it does not so very greatly matter whether we study landscape or still life, or model drawing or construction, so long as we recognize the unity of the laws which govern all these different manifestations. Can you imagine any art subject which cannot be submitted to these considerations:

- (1) As to its measure in space;
- (2) As to its shape in space;
- (3) As to its position in space;
- (4) As to its tone value in space.

Let us express it in common terms: every element presented by the landscape, every object, every manifestation of distance, light and atmosphere, every problem in perspective, design or construction can be studied in the light of these simple considerations; what is the space in which I am to place this thing? What shape is this thing? What is its position in relation to me, and to the other elements under consideration? What is its tone?

An understanding of the principle of design should permeate and influence the presentation of every division of the great subject of art. In the past, we have thought of design as affecting decoration only. How different is our understanding of the idea to-day! Design used to mean to us little else but some expression of ornament, historic or modern. Now, design means conception, purpose, production. We need to study nature, not less but more than formerly, but in the light of clearer conception, stronger purpose and with the thought of its influence in the creation of beauty. We need to study the representation of objects, in all its interesting detail of form, color, arrangement, and expression, not as ends in themselves, but in order that we may learn to look upon the world of things as subject to laws of order and beauty. We need to know more of geometry, to dig into its wonderful harmonies, and to see there revealed the marvelous manifestations of law and order, indispensable factors in the creation of beauty. Emerson declared that he studied geology that he might better write poetry. We cannot dispense with constructive work in which design, that is, conception, purpose and creation, is evidenced in concrete form; but here again we must not confuse the end with the means. The making of things is not for the purpose of glorifying things, but to the end that the faculties of creative imagination may find opportunity for development and growth.

The Minneapolis Plan.

Many interesting questions present themselves to the practical teacher. A "round-table" discussion as to the actual ways and means of presenting art principles to children of various ages is sure to be helpful. As the request for this paper was accompanied by the very pointed suggestion that it be made as practical as possible, I will tell you how the work is carried out in the particular field of my own operations, not because I consider the plan there evolved to be of particular merit, but because it may serve as a basis for definite discussion. We begin in all grades with the study of the landscape. The little children learn in these very elementary exercises the use of water color, in simple washes, by dictation. Those older express different moods and aspects of nature, and study various elements in the landscape, such as trees, roads, rivers, houses, etc., according to their ability. They work from suggestive illustrations, from imagination and memory, and from nature. In the upper grades a large part of this landscape work is done in pencil and in flat tones of color.

Pupils are taught in the fourth grade to use "finders," and below that the teacher fosters the idea of composition by the judicious use of various shapes and sizes of paper. Charcoal mass and pencil outlines are also used as media in the various grades in connection with landscape study. More time is devoted to landscape in the lower grades than in the upper.

Fall flowers and plants must be used while the season offers them, and we try to practice our own preaching

in the effort to show that different materials, such as landscape and plant life, teach the same art principles. Briefly, the work in all grades for September and October is based on the study of landscape, plant life, flowers, and fruits. In connection with the study of fruits and seedpods, much interesting work in decorative design is done by pupils in all grades. The November work emphasizes the study of still-life forms, presented differently to children of different ages and interests.

In the lower grades all nature and object drawing is pictorial in its tendencies. Much brush work is done here, making representations in mass rather than in line. With older pupils the effort is to get away from mere pictorial drawing. More serious work in composition is done, working away from literal representation into a more subjective character or style; for instance, still-life forms are put into decorative compositions in color, and into pencil values. December work is dominated by the constructive idea.

There are Christmas gifts to be made, involving the use of many different materials, according to grade. The little ones use paper, clay, soft yarns, and wools, for folding, modeling, and weaving. The older ones are working out their exercises in basketry and simple wood work, involving the making and decorating of boxes, book-racks, calendars, etc. Lettering and illuminating texts form a definite part of the work of the intermediate grades at this time.

January brings a more noticeable differentiation of the work, according to grade. The primary children draw toys and other objects attractive to them, make studies of winter landscape and of whatever material in the line of winter nature work is at hand, such as the growth of pine trees, the study of different kinds of evergreens, cones, etc. The older ones take up the study of perspective principles, from models and objects, from houses and streets, from steeples, housetops and towers, from interior corners of rooms and exterior corners of buildings according to grade. Many different media are used in this work, and it is treated sometimes in line, sometimes in mass, sometimes with reference to decorative composition, and sometimes with pictorial tendency.

February is devoted to the study of the human figure.

This is varied in the lower grades with the study of such domestic animals as are available at the season, principally cats, dogs, and rabbits. Both color and ink washes are used for this work in the lower grades, as well as charcoal or soft pencil outline. Line, pencil tones, and flat tones of color are used in the upper grades, the effort being here always to get away from purely objective work as much as is possible. Some study of geometry follows. There is a place here for elementary work in mechanical problems in the upper grades, if time allows.

Design, both pure and applied, follows in March and April, and the spring nature from landscape, flower motives, birds and insects, offers a wealth of material until the close of the year.

This in brief is our course of study, but how meager and bare it looks, separated as it is here from the rest of the school interests, with which it is so closely connected! The drawing lesson must be a vital part of the day's work, and cannot be sundered from its sister subjects "without tears."

"I buy the pictures of Mauve" remarked a clergyman in Paris, "because he puts into them what I try to get into my sermon; simplicity, suggestiveness, and logical sequence." Is not this a test also for any suggestions bearing upon the course of study in art?



An honored Canadian educator in a recent number of THE SCHOOL JOURNAL cited examples illustrating how the ordinary United States school history is not only splenetic when dealing with Great Britain, but how in some cases it purposely misrepresents facts. He refers, for instance, to the sharp encounter of Lundy's Lane which our children are taught, contrary to fact, resulted in a victory for our troops. A standard reference work relied upon as an authority by many schools is shown to declare in the edition sold in the states that we were victorious, while in Canada where the truth is well known, the statement is prudently changed to agree with the facts. Let us hope that the newer histories will be written in a more amiable spirit and adhere more closely to the truth than some of the present school books do. At any rate, let us eliminate rancor.



School at Slater, on Snake River, Colo. Mrs. Helen L. Grenfell, State Superintendent of Public Instruction.

Geography Syllabus.

(Continued from last week.)

Syllabus in geography, to be used in carrying out the new course of study as arranged for the public schools of New York city.

Grade 6B.

Asia, Africa, and Oceanica.—Physical features. Leading countries: location, surface, climate; resources; industries and occupations; products; commerce; chief cities; status of the peoples.

Asia.—Location in heat belts, in latitude and longitude, and with reference to oceans, to Europe and North America; ratio of size to other continents and to the land surface of the world; formation of harbors; bordering waters. Study of surface diversities by means of cross sections; principal rivers and river basins; their effect on soil and industrial development as determined by width, depth, and fall; climate, and its effect on plant and animal life, and on the characteristics and activities of the people. Leading countries, comparative importance; capitals; trade-relation and comparison of Asia with North America, and comparison of the leading countries with the United States.

The Chinese Empire, Japan, Ottoman Empire, India, Siberia, and other countries should be treated as fully as their relative importance demands, following the causal series: (1) Location, climate, surface, drainage and waterways; effects of climate and drainage on soil and industrial development; coastline; bordering countries; area compared with that of other countries and of the United States. (2) Resources; soil, forests, mineral deposits, fisheries; relation of vegetation to elevation, drainage, rainfall, and temperature. (3) Industries and occupations as determined by physical conditions; agriculture, grazing, lumbering, fishing, mining, quarrying, and manufacturing. (4) Products: animal, vegetable, mineral, and manufacture. (5) Commerce: routes as affected by physical and industrial conditions; means of transportation and communication; their relative value and importance; influence of European control and immigration; exports to the United States and imports from the United States. (6) Chief cities: manufacturing and commercial centers; position and importance. (7) Status of the peoples; comparative density of population; habits and customs; government.

Africa.—This continent should be studied after the same general plan followed in the treatment of Asia. The leading countries should be treated very briefly and as European possessions—British, French, German, Dutch, Portuguese, Turkish, Italian—also Congo Free State, the Soudan, and Liberia, the causal series topics being followed as in Asia.

Australia and the Islands of the Pacific, with special attention to the Philippines, treated very briefly and as colonial possessions.

Aids and Note as in 5B.

Grade 7A.

Mathematical and Physical Geography.—The solar system; relations of the sun, moon, and earth; motions of the earth; latitude and longitude; heat belts and wind belts; ocean movements; influence of climatic conditions and topographical features on plant and animal life, and on the characteristics and activities of the people.

North America and Europe.—Study of North America and Europe with reference to the physical features above mentioned.

Mathematical and Physical Geography.—The solar system; relations of the sun and planets; theory of their origin; relations of the sun, moon, and earth; adaptation of the earth for human habitation; the sun and inclination of the earth as factors: eclipses of sun and moon; motions of the earth and consequent distribution of light; axis, orbit, poles, equator, zones, circles; day and night as modified at the different seasons: latitude and longitude; relation of longitude and time; standard meridians; length of a degree of longitude at the equator and at the pole; determination of longitude by variations from a selected standard time; solar and standard time; international date line.

Heat belts and wind belts; location and causes; isothermal lines, land and sea breezes, trade winds, zones of calms, monsoons and cyclones; changes of seasons, and causes; phenomena of weather; weather charts, barometer, thermometer; difference between weather and climate; cause of dew, fog, clouds, rain; distribution of rainfall as related to surface features; erosion and drainage; relation of rainfall to the distribution of vegetation; underground water—springs, wells.

Large topographical areas; distribution of land and water; origin of continents; changes by erosion with emphasis on glaciation; coastline as determined by the addition of coastal plains and by sinking of the land; continental and oceanic islands, difference in origin, formation of volcanic and coral islands. Ocean movements; waves, tides, tidal waves, currents,

causes and effects; relations to commerce. Influence of climatic conditions and topographical features on plant and animal life, and on the characteristics and activities of the people; zones of vegetation, ranges of food plants; distribution of animals; fauna of the sea; range of human habitation; conditions favorable to civilization.

North America and Europe.—Study of North America and Europe with special reference to the physical features above mentioned. Location, thru longitude and latitude, and advantages; coast line, form, and economic advantages; study of a good harbor as a type; surface features and causes; the glacial period; drainage systems and importance; coal, oil, and metal deposits; location in wind belts and consequent distribution of temperature and rainfall; influence of climatic conditions and topographical features on plant and animal life, and on the distribution, characteristics, and activities of the people.

Aids and Note as in 5B.

Grade 7B.

Commercial Geography.—The United States and its colonial possessions compared with other great commercial countries: location, surface, climate; resources; industries and occupations; products; commerce; chief cities; status of the peoples.

United States.—Review of the United States, and of its colonial possessions, as a basis for comparison of this country with other great commercial countries (including their colonial possessions), in the following causal series: (1) Location, climate, surface, drainage, waterways and artificial irrigation; comparison of eastern and western highlands—altitude, ruggedness, and extent. (2) Resources: soil, forests, mineral and oil deposits, and fisheries. (3) Industries and occupations as determined by physical conditions; agriculture, grazing, lumbering, shipping, fishing, mining, quarrying, and manufacturing. (4) Products: animal, vegetable, mineral and manufactured: areas of staple products. (5) Commerce: routes as related to physical and industrial conditions; means of transportation and communication; mail, telephone, and telegraph service; railroad trunk lines and steamship routes; relative advantages of speed; effect on immigration; exports and imports. (6) Chief cities; manufacturing, commercial and railroad centers; position and importance as determined by physical and industrial conditions, causes for the growth and development of the leading cities of the United States, as New York, Chicago, Philadelphia, Baltimore, Boston, St. Louis, Denver, San Francisco, New Orleans, Pittsburg. (7) Social development of the country and of its colonial possessions as influenced by location, climate, drainage, resources, industries, transportation, and communication; status of the people in regard to education, literary and artistic attainments, language; great universities; scientific advancement as manifested in discoveries, inventions, and engineering; customs of the people; government.

A brief treatment of the other leading commercial countries of the world should be made, specially those having commercial relations with the United States: Great Britain, France, Germany, Russia, Italy, China, Japan, Brazil, Argentina.

Aids and Note as in 5B.

(To be continued.)

"Summer Food"

Has Other Advantages.

Many people have tried the food Grape-Nuts simply with the idea of avoiding the trouble of cooking food in the hot months.

All of these have found something beside the ready cooked food idea, for Grape-Nuts is a scientific food that tones up and restores a sick stomach as well as repairs the waste tissue in brain and nerve centers.

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"We soon made a discovery, we were enchanted with the delightful flavor of the food and to my surprise I began to get well. My breakfast now consists of a little fruit; four teaspoonfuls of Grape-Nuts; a cup of Postum, which I prefer to coffee; graham bread or toast and two boiled eggs. I never suffer the least distress after eating this and my stomach is perfect and general health fine. Grape-Nuts is a wonderful preparation. It was only a little time after starting on it that wife and I both felt younger, more vigorous, and in all ways stronger. This has been our experience.

"P. S. The addition of a little salt in place of sugar seems to me to improve the food." Name given by Postum Co., Battle Creek, Mich.

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The Educational Outlook.

More than 600 students are attending the summer session of Columbia university. An important feature of the work is the lectures given on Tuesday and Thursday afternoons to the members of the school.

Justice Greenbaum has, in the Supreme Court, denied the application of Ferdinand Bruhns, a teacher of German in the New York public schools, for a writ of mandamus directing the superintendent and board of education to reinstate him in the schools. Mr. Bruhns had been teaching under a temporary license which was renewed from year to year. Last February, Superintendent Maxwell refused to renew it. Justice Greenbaum decided that the statute, in the charter, relating to renewals does not make it obligatory to make permanent a temporary license which has been renewed.

Melvin Hix, first assistant in P. S. No. 11, Bronx, was recently the guest of honor at a luncheon given by his principal and fellow-teachers in honor of his promotion to the high school.

District Supt. Charles S. Haskell, of New York city, died suddenly at his summer home, Falmouth, Me., July 12. Mr. Haskell had suffered from ill-health for several months. He was formerly principal of P. S. No. 2, Brooklyn, and was elected district superintendent last October to succeed Mr. Edson, who became associate superintendent. He had charge of Districts 13 and 15, Manhattan.

Superintendent Haskell was graduated from a high school at Auburn, Me., in 1877, and from Bates college four years later. Before and after his graduation he served as teacher and principal in several high schools and academies. He went to Brooklyn as principal of No. 2 in 1897.

University Convocation.

The forty-first convocation of the University of the State of New York was held June 30 and July 1, in the state capital at Albany. In greeting those present at the opening session Chancellor Doane said:

"Strange as it may seem after the century and a quarter of its existence, the university still seems to need some explanation, some *raison d'être* to the world at large. I am quite free to say that in my own judgment this necessity arises not from indistinctness and indefiniteness in the position of the university, but from a misunderstanding growing out of the modern misuse of words. The conception of a university to-day confines itself, in the minds of most people, to an institution of learning with its various faculties grouped in one place, and giving instruction in its various departments to pupils gathered in that place thru resident instructors. This is an accepted, but not an exclusive or exhaustive use of the word. As long ago as the twelfth century, and as far away as Paris and Bologna, these universities cared for students gathered in different colleges, hotels, and pedagogies, and it is I think, quite fair to say that apart from the derivative meaning of the word, its earliest use was not confined to, even if it was connected with, buildings and appliances for instruction centered in one spot. The best definition of a university is, 'an association of men for the purpose of study, which confers degrees which are acknowledged as valid thruout Christendom, is endowed and is privileged by the state, in order that the people may receive intellectual guidance, and that the theoretical problems which present themselves in the development of civilization may be resolved.'

"We recognize that the most modern

and the most material conception of a university has its full realization. Is it buildings? Then we point with pride to the high schools and academies, the colleges, universities, professional and technical schools scattered thruout this state. Is it apparatus? Then we recall the furnishings complete and thoro which come to so many of them in large part from the university. Is it libraries? Our own unrivaled collection of books (crying with a voice which ought to be irresistible for better housing), the constant increase of volumes in the libraries of the various institutions of the university, and the practical usefulness of our system of traveling libraries more than make good this point. Is it pupils? Surely, the thousands of boys and girls, young men and young women, prepared for and passing our regents' examinations answer the most exorbitant demands. Is it scientific research? New York thru the university of the state stands pre-eminent in the character and reputation of its attained results. Is it instructors? You who are here to-night, many of you carrying on with untiring devotion, and carrying out with acknowledged and proven ability the intellectual guidance of the pupils, 'you are our letters of commendation,' 'you are our glory and our joy.' And I may not fail to add that it is the intention and desire of the University of the State of New York to include the largest possible number of qualified pupils in the arrangement for the distribution of the money allotted by the legislature for non-resident tuition fees."

At the morning session, July 1, the following resolution favoring unification was adopted: "Resolved, that the best interests of education in the state of New York demand that all supervision of the educational interests of the state be exercised by a single department, and that that department be so organized as to be as free as possible from the influence of party politics."

The first address of the morning was by Pres. George E. McLean, of the State University of Iowa, who spoke on the "Promise and Potency of Educational Unity in the United States." Discussion was led by Prof. A. P. Brigham, of Colgate; Prof. E. E. Hale, Jr., of Union; and Prin. T. H. Armstrong, of Medina.

Dr. Helen C. Putnam, of Providence, R. I., read a paper on the teaching of hygiene, in which she said she hoped the time would come when public teachers would be required to be passably qualified to teach hygiene. Editor Walsh, of the *Medical News*, said that we too frequently associate hygiene with dirt and disease. Prof. Duncan C. Lee said that the importance of teaching hygiene to the young is not generally understood. "Every boy," he insisted, "should be filled with the idea that he cannot be a good boy until he is a clean boy. Cleanliness is a part of morality and I believe in teaching morality."

Pres. Andrew S. Draper, of the University of Illinois, was received with hearty applause at the afternoon session. "There is never any question in the West of supporting the elementary schools," Dr. Draper said. "I suppose there is no question here in the East: but this I do know, there is a cleavage in your population, and some give the public schools but perfunctory support. The good old 'common school' has ceased to be what it once was, 'common' to all, and is not now good enough for your man of wealth, and he educates his children elsewhere. It is not so in the West. There is no public high school question there. The masses of the people of the West support the public high school. The educational sentiment leads also to the willing support of the colleges and

universities for all the people.

"I do not trouble myself about educational unity; I do not lay such great stress upon the unifying of things generally. The general purpose of all our educational schemes is the culture and broadening of the mind, and all the mental and moral processes which go to make up true, intelligent American citizenship."

Editor Ossian H. Lang read a paper on "The School as a Social Center." He said that there is a growing faith in the power of the schools to shape the course of nature. The common school brings aliens, both foreign and native-born, into harmony with our institutions. The sphere of the school is being extended to take in the whole family. It is capable of becoming a great social regenerating influence and force. Prin. Myron T. Scudder, of New Paltz, described a Georgia school which is a real social center.

The convocation closed with the evening address, by Pres. Henry Hopkins, of Williams college. Dr. Hopkins' subject was, "Education and the Social Trend."

New York State Teachers.

The teachers had a splendid time at the Cliff Haven meeting of the New York State Teachers' Association. The time, July 1-3, made it especially convenient for those present to go directly to Boston for the N. E. A. after leaving Cliff Haven.

The convention was formally opened with a reception tendered by the citizens of Plattsburg. Mayor Albert Sharon welcomed the visiting teachers and assured them that it would be a source of pleasure to the citizens to entertain so many teachers. He praised the work of the association and expressed the hope that the teachers would get as much good from the meetings of the association as the residents of Plattsburg got pleasure from having the teachers with them. Pres. T. R. Keil, of Saratoga Springs, on behalf of the teachers, thanked the mayor for his kind expressions. He briefly reviewed the work of the association during the past year, showing that much more had been accomplished than in the preceding year. Addresses were also made by the Hon. J. B. Riley, and the Rev. M. J. Lavelle, president of the Champlain Summer institute.

The first of the general sessions opened at 9:30 on the morning of July 2. The physical side of education was the theme for discussion. Inspector James L. Hughes read an excellent paper on "The Dwarving of Childhood by Educational Processes." He deplored what is known as over-education of children—that is, forcing too much knowledge into a child's mind before the little one is able to assimilate it. He protested against the so-called "fads" which tend to reduce the time which ought to be given to the fundamental elements of education.

Dr. Helen C. Putnam, chairman of the committee of the American Academy of Medicine, on teaching hygiene in the public schools, spoke on "The Teaching of Hygiene." She frankly admitted that the results of the teaching of this subject in many schools were unsatisfactory. Many educators are only too willing to lay the failure to the character of the subject rather than to the method in which it is presented. Dr. Putnam suggested several remedies which she was sure would bring about improvement.

Dr. Walsh, of New York, pointed out how the schools might work for improvement in the sanitation of the community and the home, and Dr. Luther H. Gulick, director of physical training in New



School at Upper Hayden Valley, Colo. Mrs. Helen L. Grenfell, State Superintendent of public instruction.

York city, spoke on "Physical Education."

The afternoon was occupied with meetings of the various sections. The normal section discussed courses of study. In the reading and speech section the discussion was opened by Prin. T. B. Palmer, of the Fredonia Normal school, Caroline B. LeRow reading a paper on "The Soul of the Reading Lesson." At the meeting of the commercial education section, Prin. William McAndrew, of the New York girls' technical high school, delivered an address.

THE SECOND DAY.

In the morning of July 3, Prin. Wilbur F. Gordy, of the North school, Hartford, addressed the convention on "The Teaching of History in Elementary Schools." Education he considered to be a process

of growth. It is not static but dynamic, and it has to do with the operations and products of man's will. Continuing, Dr. Gordy said:

"History is a record of the growth of the human spirit, as it has sought to achieve its ideals. The historian must have a knowledge of events, but these are only the symbols of the truth that vitalizes and inspires us for right living. The truth itself lies too deep for aught but the eye of the spirit to discern. The problem is to get at the hearts and heads of the doers, in other words, to understand and appreciate the soul of history."

In the earlier stages of the work simple material should be used because the child craves more life. He is fond of the dramatic, the picturesque, the concrete, the personal—of deeds of daring, of tales of

heroism, of striking adventures, of thrilling episodes. No geography and no chronology are needed at this very elementary stage in the lowest primary grades. In the later grades an attempt should be made to teach organized history including some of the most important epochs of English history and the entire range of American history.

A discrimination between historic and poetic truth should be made. The story of "Washington and the Hatchet" may not be true historically, but it embodies the spirit of the man who, above all things else, stood for truth. Barbara Frietchie did not see Stonewall Jackson, and therefore there is no historic truth in the poem. But in the highest sense it is true because Barbara Frietchie represents the loyal spirit of Maryland—that

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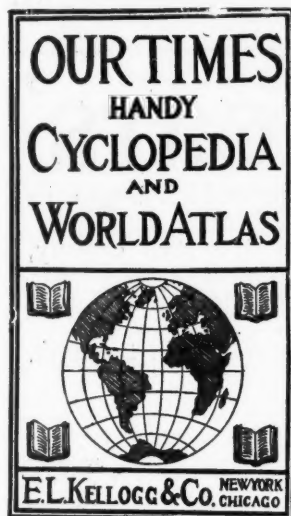
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In speaking upon "School Gardens and School Ground Improvement," Dick J. Crosby, of the United States department of agriculture, argued that school gardens and their care tended largely to cultivate self-reliance and facility in handling things in a practical and useful manner. In school gardens there is no attempt to make the study a deep one. The simple details of work are taken up and the different stages of cultivation studied. The speaker called attention to the success which has followed such study in New York state, and remarked that in Europe many schools devote a considerable amount of time to the subject. It is not necessary, in his opinion, to divorce school gardening from other work, for it can be easily combined with other instruction. Regarding the improvement of school grounds, Mr. Crosby urged the teachers to undertake the work with a will. The results, he was sure, would more than repay the labor expended.

George A. Watrous, of the Utica free academy, spoke on the merits and demerits of the teaching of English, and Prof. L. H. Bailey delivered an address on the rural school problem.

Mrs. Jane L. Stanford has been elected president of the board of trustees of Stanford university. In her address she is said to have made the unexpected announcement that the power to choose and discharge professors would hereafter be in the hands of the trustees. This power has heretofore been in the hands of President Jordan.

For pimples, blotches, bad complexion, Hood's Sarsaparilla is the medicine to take—it has established this fact.

Literary Notes.

The July *Atlantic* contains, among other articles, "The Literary Development of the Pacific Coast," by Herbert Bashford; "Life at a Mountain Observatory," by Ethel Fountain Hussey; "What is Comparative Literature?" by Charles Mills Gayley, and "A Bunch of Texas and Arizona Birds," by Bradford Torrey.

Short Stories is a magazine planned to cover the story-telling field of the world. Among the stories in the July number are "The Obtrusive Gargoyle," by Frances Irvin; "A Pearl of China," by Harold Ballagh, and "A Split Infinitive," by Mary F. Leonard.

Masters in Art for July is devoted to Carpaccio of the Venetian school. It contains plates of ten of his most celebrated paintings with a biography of the artist and descriptive matter.

The contributions to the July *Forum* include "American Politics," by Henry Litchfield West; "Foreign Affairs," by A. Maurice Low; "Literature: Recent Biography," by H. W. Horwill; "Archæology: Recent Excavations in the Roman Forum," by James C. Egbert, Jr.; "Ed-

ucational Outlook," by Ossian H. Lang, and "The Society of Educational Research," by J. M. Rice.

The articles in the July *Chautauquan* that will attract most attention are: "Chautauqua Reminiscences," by Bishop Vincent; "Nicholas II., of Russia," by Edwin A. Start; "The Evolution of a Reading Course," by George E. Vincent, and "The Queen of England at Home," by Felicia Bultz Clark.

It is quite unusual to find an issue of a magazine so timely, and, at the same time, of so permanent value as the June number of the *Journal of Geography*, published by Messrs. Rand, McNally & Company, of Chicago and New York. This is a "Special Boston Number" in honor of the National Educational Association, and it is devoted to the geography of Boston and vicinity. This particular issue will appeal to every one who wants to know more of the geography, the history, and the modern development of this New England city and its environs. Among the leading articles are: "The Geographical Features of Boston and Vicinity," by George H. Barton, president of the Appalachian Mountain club; "Excursions In and Around Boston," by Charles F. King, of the Dearborn school, Boston; "The Boston Park System," by Arthur A. Shurtleff, of Boston; "Boston, a Center of Industry," by Philip Emerson, of the Cobbet school, Lynn, Massachusetts, and "The Geographical Development of Boston," by F. P. Guilliver, of St. Mark's school, Southboro, Massachusetts. Richard E. Dodge, professor of geography in the Teachers college, Columbia university, has prepared a fascinating article, "Approaching Boston." The numerous illustrations scattered thru this number are splendid examples of modern half-tone printing.

In addition to its usual fine review of the events of the month the July *World's Work* contains several articles of an especially timely nature. Among these are: "Russia and the Nations," by W. M. Ivins, Jr.; "A Farmers' Trust," by H. A. Wood; "Short Vacations by Trolley," by Albert Bigelow Paine, and "A Glimpse of the Jewish World," by Richard Gottlieb.

A Modern English series, which promises to attract much attention, will shortly be published by the B. F. Johnson Publishing Company, Richmond, Va. The first two books—Language Lessons—are in preparation; the grammar is now coming from the press. The authors are: Dr. C. Alphonso Smith, professor of English in the University of North Carolina, and Mrs. Lida B. McMurtry, supervisor of primary methods, DeKalb Normal school, Ill.

Some of the articles in *The Popular Science Monthly* for July are "Hertzian Wave Wireless Telegraphy," by Dr. J. A. Fleming; "A Comparison of Land and Water Plants," by Prof. George James Peirce and "The Story of English Education," by J. E. G. de Montmorency.

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The leading articles in *The Critic* for July are "Alexandre Dumas," by Francis Grierson; "Artist Life in New York," by William Henry Shelton; "The Stage as a Moral Institution," by Henry Davies, and "The Novels of Lord Lytton," by Francis Gribble.

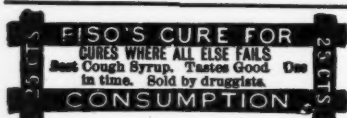
A special feature of *Lippincott's* for some time past has been a complete novel by a writer of note. The story in the July issue is "The Pretenders," by Ina Brevoort Roberts. In addition to this, the paper has a choice collection of stories and poems.

Among the attractions in the July *St. Nicholas* are the following: a story about "A Pair of Poachers," by Ralph Henry Barbour, "In the Cavalry," by Frances Courtenay Baylor, and "The Story of King Arthur and his Knights," by Howard Pyle.

Hints to Golfers recently issued by The Baker & Taylor Company was written, and published privately, by "Niblick" of Boston. The book attracted very wide attention and the responsibility for its authorship was laid upon practically every professional and amateur golfer of note in the country. Niblick's identity has been one of the puzzles of the golf year. His book, however, has rapidly gained a reputation as the standard.

The Journal of Infectious Diseases will be issued this fall under the editorship of Professors Ludwig Hektoen and Edward

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A book of "Famous Assassinations," will be published shortly by A. C. McClurg & Company. The volume will give accounts of some thirty of the most significant political assassinations in the world's history, beginning with the murder of Philip of Macedon in 336 B. C., and ending with the slaying of President McKinley in 1901.

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Via Pennsylvania Railroad, Account G. A. R. National Encampment.

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